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THE RUBBER FOOTWEAR TRADE.

RECENT meteorological conditions in this country have not been all that the earnest and ambitious rubber footwear man could ask. The Middle West had the driest January in almost a decade, and in the East the precipitation was not at all satisfactory to the dealer with a generous supply of "Storm King" boots and four-buckle gaiters on hand.

The winter started with a glow of promise, the first half of December pointing to an old-fashioned winter. There was a creditable fall of snow and it was well distributed, and the orders flowed in to the footwear manufacturers in a way that indicated that the trade was far from being in an over-stocked condition; in fact, the quickness of the response to the first display of winter weather proved conclusively that the supplies on hand were exceptionally light. This conclusion seems further to be borne out by the fact that notwithstanding the openness of the weather during the past six months, orders received by the manufacturers are well up to their normal level for this time of the year, and the factories, though not pushed, are at least running on comfortable schedules. But it goes without saying that a vigorous and well-developed snow storm, starting in at Seattle and pro-

DEATH OF MR. HAWTHORNE HILL.

It is with deep sorrow that we announce the sudden death from pneumonia of Mr. Hawthorne Hill, for ten years associate editor of THE INDIA RUBBER WORLD, which occurred in New York, February 2, just as this issue was going to press. Few men in the United States had a more accurate knowledge of the industry this journal represents, or a better conception of its possibilities, than Mr. Hill. Possessing an analytical mind, a tenacious memory, and a brilliant pen he was able to command and hold the attention of the leaders in the rubber field. His intimates knew him as a sympathetic and loyal friend who was ever ready to give the best there was in him to those who were in need. A biographical article dealing with Mr. Hill's career will appear in the March number.

ceeding with proper dispatch and determination on to Eastport, Maine, would be cordially welcomed by the trade.

Of course there is plenty of time yet for winter of the most pronounced type—as some of the older members of the footwear fraternity will prove to you by citing the winter of 1888, which was exceptionally mild and innocuous until well into March, when there came that memorable blizzard that paralyzed three-fourths of the continent and sold every last pair of rubbers from New York to San Francisco.

Here's an interesting problem for the psychologist: The rubber shoe manufacturers report a noticeable demand for high-heeled rubbers for men. This, of course, indicates a masculine affectation of high-heeled leather shoes.

But this demand for high-heeled rubbers does not come from the effete East, so often charged with slavish emulation of continental ways; nor does it come from metropolitan centers, where the average male is assumed to give more heed to personal adornment than is the case with his rural relatives. The demand for the "Military Heel" and other high-heeled rubber styles comes from the heart of the West, from the lesser centers of population and from the more pastoral walks of life, where living is plain and thinking high. Now why is this? Let the psychologist get to work.

CANADIAN RECIPROCITY.

IF Canada was separated from the United States by a few hundred miles of water it is quite likely that a reciprocal trade agreement between the two countries would not be regarded as necessary, or even desirable, for some time to come, but located as they are, shoulder to shoulder, with many commercial inter-

ests in common it is not surprising that the importance of establishing a closer trade relationship, especially in view of the remarkable development of the natural resources of both countries during the past two years, should of late force itself upon the attention of statesmen on each side of the border. Attempts have been made from time to time to get Congress to adopt a reciprocity agreement that would be fair and equitable to both Canada and the United States, but thus far they have met with indifferent success.

President Taft, who, even his enemies will concede, is a broad-minded and far-seeing executive, realizing that the time has arrived when something should be done to promote our commercial relations with Canada, has presented to Congress for its consideration a reciprocity treaty that is wider in scope and more revolutionary in character than any hitherto brought to the attention of that body.

The agreement, which has been prepared with great care by representatives of both countries after many conferences, provides for the mutual free entrance of live stock, agricultural products, fruits and fish, and for making paper, wood pulp and pulp wood mutually free whenever the Canadian restrictions on exportations of these articles are withdrawn. The treaty arranges also for a concession on agricultural implements of certain classes and on a few kinds of iron and steel products.

Anticipating that the treaty may arouse opposition because of its apparent violation of the protective principle so long maintained by the government, President Taft, in his message accompanying the document, holds that a commercial agreement with Canada "by which we shall have direct access to their supply of natural products without a prohibitory tariff, is not a violation of the protective principle because that principle does not call for a tariff between this country and one whose conditions as to production, population and wages are so like ours, and when our common boundary line of 3,000 miles in itself must make a radical distinction between our commercial treatment of Canada and any other country."

The President contends that if adopted the treaty will cement friendly relations with the Dominion because of the settlement of controversies that have lasted for a century, and will promote good feeling. Moreover it will extend the market for numerous products of the United States and deepen and widen the sources of food supply in contiguous territory, and greatly facilitate the movement.

As was to be expected, the proposed trade agreement has aroused considerable discussion throughout both Canada and the United States. Members of Congress representing the Northwestern States protest against it on the ground that it will seriously infringe upon the barley, flax and cereal interests of that section of the country. Members representing

lumber States both North and South are opposed to some of its provisions on the ground that if adopted their business will be greatly injured.

Shrewd observers at Washington declare that it will be impossible to secure action on the treaty at the present session of Congress because of the pressure of other business and assert that it would not be surprising if an extra session should be called for its consideration. In any event it is not likely that the treaty will be adopted in its present form.

Just what the final effect of the adoption of a reciprocal agreement like the one recommended by President Taft will have upon business is wholly conjectural. The reciprocal feature of the McKinley tariff law, of which so much was expected, did not materially increase our trade with any other country. Brazil buys more rubber goods from other countries than from us although there has been a heavy reduction in duties on imported American products. As for Canada it may be said that while she admits British rubber goods at a very low preferential she keeps on buying large quantities of the products of the United States.

WHY THE TRADE PAPER AD. PULLS.

THE manufacturer or wholesaler who neglects to take advantage of the assistance of a good trade paper in promoting his interests is losing the aid of the most powerful selling force with which the commercial world is acquainted. Advertising has been defined as "salesmanship on paper," and it does not require very much figuring to prove that it is the cheapest way of selling goods yet discovered.

The chief value of the trade paper lies in the fact that it segregates from the great mass of business men those who are specially interested in a particular industry and gives the advertiser an opportunity to present to them directly the message he wishes to deliver. It reaches the very men who need what he wants to sell. No manufacturer, however rich he may be, can afford to send salesmen to call on each one of them individually.

The representative trade paper is regarded as an authority in its field. Its editor is usually a man of commanding ability who possesses an expert knowledge of the business, who watches what is going on in all parts of the world, and who is ever on the alert to protect or promote the interests of his constituents. Through the aid of his correspondents and his staff of experts he keeps his readers informed of every important news event connected with the trade; he presents technical articles dealing with improvements in the processes of manufacture; he analyzes markets and trade conditions and points out their significance; he calls attention to new fields for the exploitation of certain products, and makes valuable suggestions.

Because of its commanding importance the trade paper has a prestige that is of infinite value to the advertiser who uses its columns. Its readers in general look to it for accounts of the latest inventions, for lists of dealers who can furnish them with the most approved machinery, the best raw materials and supplies of various kinds. Hence an advertisement printed in its pages commands attention because it carries with it the implied, if not expressed endorsement of the publishers. It possesses, moreover, a pulling power that is not inherent in the circular, booklet or catalogue.

No up-to-date business man can afford to ignore the paper that covers his own particular field. He depends upon the information it furnishes, whether in the editorial or advertising columns. He knows that the publisher will not knowingly allow any irresponsible or unworthy firm to use its pages to defraud its readers. It is to the credit of the trade paper publishers of the United States that seldom is this confidence betrayed. Editors are only human and are themselves sometimes deceived by advertisers, but when this happens, which is not often, the fraud is soon discovered and made known.

Already the admission of an advertiser to the columns of a trade periodical of high standing has come to be regarded as a distinct honor because of the privilege it gives him to address from ten to fifteen thousand intelligent readers, many of whom may become possible customers.

IT IS INTERESTING, IF NOT IMPORTANT, to know that there is one place where discussion of rubber planting conditions is no longer considered necessary. In Mexico, in Africa, and in the Far East, even on the most advanced plantations, many questions regarding rubber culture are still dealt with as unsettled. We have seen a mention of five rubber plantations in Ceylon, in the same district, all accounted successful, and employing as many different tapping systems, the manager in each case considering his practice the best. But discussion of such points is not welcomed in the Philippine islands. At least the *Manila Daily Bulletin*, in the columns of which several correspondents engaged in a discussion of rubber planting details, peremptorily put a stop to the matter by announcing: "To avoid further controversies these notes will be discontinued." If the planters around Manila cannot agree upon such a simple matter as planting rubber, let them hire a hall and thresh out the question—but not molest the newspaper editors.

WHO CAN SAY THAT THE LAST WORD has been heard in rubber invention, or even in any one single branch of the industry, when the patent offices of every country continue to grind out new issues relating to rubber and its applications? One would have thought that certainly no field existed for a new patent on a rubber eraser, since the original rubber eraser—back 140 years ago, when its use suggested the name "rubber"—was not protected by any patent. But here comes a Californian, with a new-fangled shape for an "eraser tip for pencils" and means for attaching the same, and the United States has granted him a patent on it. Considering how much more complicated is the field of rubber tire invention, it promises to keep patent office examiners busy for a very great while to come.

COLONEL COLT ON THE RUBBER OUTLOOK.

IN an interview in the *New York Journal of Commerce*, Colonel Samuel P. Colt, president of the United States Rubber Co., is quoted as saying that on account of the extreme high prices of crude rubber during part of 1910, manufacturers were obliged to reduce their output, and also to advance the prices of goods. He says that this undoubtedly had an effect on consumption, but as there has not been discovered a substitute for rubber in tires, the influence on this particular line has not been material. With the decline of crude rubber, the industry has been approaching a normal condition. Colonel Colt regards prospects for 1911 as favorable to lower prices for crude rubber than for past two years.

Regarding the rubber footwear trade, which depends more upon the state of the weather than on any other condition, Colonel Colt says: "The prices of boots and shoes were never advanced proportionately to anything like the advance in crude, and owing to the change in conditions of crude, the advance of 12 per cent. that was made on boots and shoes was reduced later. The boot and shoe trade is now in excellent condition. The early winter has so far been exceptionally advantageous to the footwear market. Concurrently with this, stocks throughout the country are light, which would indicate a healthy condition and the possibility of increased orders for next season."

In the opinion of President Colt the year 1911 will witness as large, if not a larger demand for tires, than during any previous year. He regards the extreme high prices for crude rubber as having been due in part to speculation, adding: "The artificial character of the market was emphasized by the remarkable and steady decline that followed." In view of the stocks reported to exist in certain quarters, he thinks that the speculators who manipulated the market for high prices have had a costly experience, much of their holdings today having accumulated at prices high above those now ruling.

QUALITY OF PLANTATION RUBBER.

AT the last annual meeting of the India-Rubber, Gutta-Percha and Telegraph Works Co., Limited, the chairman, in discussing the market for crude rubber during the past year, said:

"We, in common with every other manufacturer of india-rubber goods, view with pleasure the development of india-rubber cultivation, and will continue to give those engaged in it such assistance as lies in our power. The quantity of this rubber which will be eventually produced will be very large, and plantation rubber will form an important feature in the raw rubber market. It is, therefore, to be hoped that those producers who will establish a reputation for the quality of their produce will jealously maintain that reputation so that the confidence which is necessary between buyer and seller may not be unduly disturbed. This care should be all the greater because plantation rubber is not, strictly speaking, a raw product; it is partly manufactured, and therein lies the danger so far as quality is concerned."

IN commenting on the quality of the plantation rubber coming under his notice, Mr. A. D. Thornton, of the Consolidated Canadian Rubber Co., Limited, writes in *The India-Rubber Journal*: "Please do not think I am writing in a carping spirit. In my opinion the man on the plantation should know what the manufacturer desires, and the latter should not hesitate to express those desires. The manufacturer is forced to obtain certain results. If he cannot obtain them from 'plantation' he must go back to Para. May I suggest that the word 'Para' be not used in connection with plantation rubbers. Let 'plantations' create their own record, let them have their own standing; it should not be necessary to use the word 'Para' to exploit them."

VOLUME OF THE GUAYULE TRADE.

WHILE no exact figures are available as to the exact amount of guayule rubber produced or sold, a fair idea can be gained from the statistics of Mexican crude rubber generally. Before the appearance of guayule in commercial quantities, the exports of rubber from Mexico averaged less than 400,000 pounds annually, and it is probable that they do not now exceed 1,000,000 pounds. It may be assumed, therefore, that the figures given below, in excess of 600,000 pounds yearly, relate to guayule:

UNITED STATES IMPORTS OF MEXICAN RUBBER.

	Pounds.	Value.	Average.
Year ended June 30, 1904.....	366,104	\$148,921	40.7 cents.
Year ended June 30, 1905.....	352,690	185,951	52.7 cents.
Year ended June 30, 1906.....	1,705,915	866,283	50.6 cents.
Year ended June 30, 1907.....	7,175,097	2,877,022	40.1 cents.
Year ended June 30, 1908.....	9,269,443	3,888,684	41.9 cents.
Year ended June 30, 1909.....	15,460,365	5,466,904	35.3 cents.
Year ended June 30, 1910.....	23,486,384	10,918,104	46.4 cents.

The United States customs authorities are now reporting total monthly imports of "guayule gum," without respect of origin—though it all comes from Mexico—and, under another heading, the arrivals from Mexico other than guayule. The result, thus far reported, has been as follows, the third column giving the apparent total imports from Mexico:

	Rubber.	Guayule.	Total.
July, 1910.....pounds	102,923	2,254,194	2,357,117
August	62,483	1,885,612	1,948,095
September	28,567	788,931	817,498
October	76,351	2,004,634	2,080,985
November	22,666	1,965,141	1,987,807
Total, 5 months.....	292,990	8,898,512	9,192,502

MEXICAN EXPORTS OF CRUDE RUBBER.

[Official Returns for Years ending June 30.]

To—	1906-07.	1907-08.	1908-09	1909-10.
Germany ...pounds	2,016,230	2,067,872	172,905	266,141
Belgium	33,211	196,084	736,435	856,715
Spain	35,389	46,266	.....	2,693
United States	8,128,380	9,788,962	12,167,767	16,308,453
France	105,787	39,827	109,756	168,832
Great Britain	1,855	230,351	45,874	147,217
Canada .....	.....	783	.....	.....
British Honduras...	114	961	220	130
Panama .....	.....	535	.....	.....
Italy	282	.....	.....	.....
Cuba .....	.....	.....	425	.....
Total	10,321,248	12,372,241	13,233,382	17,750,181

GUAYULE SHRUB.

The exportation of the guayule shrub, to be worked into rubber elsewhere, is increasing at a rapid rate, in spite of the export duty imposed. The figures given for the fiscal year ended June 30, 1910, are as follows, with comparative figures for three preceding years:

To United States	pounds 9,379,605
To Germany	1,182,137
To France	899,089
To Belgium	96,928
To Spain	8,430
To Great Britain	7,124
Total	11,573,313
Total, 1908-09	6,649,416
Total, 1907-08	2,844,325
Total, 1906-07	1,471,226

These figures are surprisingly large in the estimation of leaders in the trade in the United States to whose attention they have been called, while the official return of export values of guayule shrub are so large as to call for official explanation before they can be presented in these pages. A comparison of the Mexican official statement of exports of guayule, compared with the United States statement of imports, suggests that the Mexican customs service may have included under "guayule shrub" a good deal of guayule rubber.

FOREIGN TRADE OF CANADA.

OFFICIAL (unrevised) returns from the department of trade and commerce of Canada for the six months ended September 30—the first half of the fiscal year—for three years past contain the following details regarding the imports and exports of manufactures of india-rubber and gutta-percha; also, the imports of raw rubber and gutta:

IMPORTS OF MANUFACTURES.

	1908.	1909.	1910.
From United States	\$336,670	\$486,301	\$799,977
From Great Britain	81,792	159,109	355,285
From Germany	9,121	18,576	22,322
From Other countries	5,892	7,485	11,719
Total	\$433,475	\$671,471	\$1,189,303

EXPORTS OF MANUFACTURES.

	1908.	1909.	1910.
To United States	\$5,120	\$44,615	\$22,204
To Great Britain	14,257	18,783	28,875
To Australia	19,017	9,321	15,795
To Other countries	55,088	64,164	37,930
Total	\$93,482	\$136,883	\$104,804

IMPORTS OF RAW MATERIAL.

	1908.	1909.	1910.
United States	\$925,446	\$1,521,739	\$1,981,902
Great Britain	9,271	252,172	75,055
Other countries	1,800	5,531	20,816
Total	\$936,517	\$1,779,442	\$2,077,773

THE SEA ISLAND COTTON SITUATION.

JOHN MALLOCH & CO. (Savannah, Georgia) in their last circular for 1910 reported regarding the market for Sea Island cotton for the period immediately preceding: "Sales consisted mostly of a poor style of Fancy at 30 cents. There is decidedly more disposition to sell, but factors have refused bids of a cent under quotations for a fair quantity of cotton. Receipts consist almost entirely of low grades, and the staple of this class of cotton is poorer than we have seen since the crop of 1907-08. The running stock shown by the Cotton Exchange is 20,837 bales, but we do not believe the offering stock of all grades amounts to 4,000 bales. The offerings of Fancy cotton are comparatively nothing, and we fear there is going to be a great scarcity of this grade."

Under date of January 6 the same firm reported: "The market ruled quiet during the week, but with a fairly large unexecuted order in the market for Extra Choice at 28 cents, it looks as if factors would have to come to this price, and business may result in the next few days. Fancy cotton continues exceedingly scarce, and business in this quality can only be done in retail quantity except at much higher prices, which would have to be paid to induce holders to sell. In view of the small demand we are surprised to see how few distress lots are being offered, and it looks to us now as if the market was about bottom."

STATISTICS FOR FOUR SEASONS (BALES).

	1907.	1908.	1909.	1910.
Stocks, September 1.....	709	3,223	2,340	1,897
Receipts	46,526	68,832	73,624	54,844
Total	47,235	72,055	75,964	56,741
Less Exports	33,303	52,991	56,873	28,221
Stocks, Dec. 31.....	13,932	19,064	19,091	28,520

December 31 Quotations for Georgias.

	1907.	1908.	1909.	1910.
Medium	15	.....	.....	.....
Medium fine	16	13	.....	26
Fine	17½	14	26	27
Extra fine	20	14½-15	27-27½	28
Choice	22½-24	17 -17½	28	29
Extra choice.....	28 -29	18½-19½	29-30	30-31

India-Rubber in Dutch Guiana.

By the Editor of "The India Rubber World."

SECOND LETTER.

Mistaken Ideas Concerning Dutch Guiana.—Paramaribo the Restful.—A City Without Skyscrapers, Electric Cars or Autos.—Our Tiny Tidy Hotel.—So-Called Daily Papers.—The Black Dutch and Characteristic Incidents.—The City's Healthfulness.—A Bush Experience.—Wild Rubber.—Discovery of the "Revea Guyanensis."—Experiments in Tapping and Coagulation.

FOR some reason Dutch Guiana is little known in the United States and Europe, and in a misty way is believed to be exceedingly hot and unhealthy. It actually is neither. The temperature is very even and varies from 70° to 93° Fahrenheit. It is warm and humid but not unbearably so. In fact this colony, with its area of 129,000 square miles, sandwiched in between French and British Guiana and touching Brazil on the south, is a very desirable bit of the tropics and its 87,000 inhabitants are among the most interesting people in the Americas.

One of the most restful spots in the world is Paramaribo. Its quiet is never disturbed by trolley gong or automobile horn, for of street cars and autos there are none. The shrill barking of importunate cabmen at railroad station or pier is unknown. The half a dozen carriages that are for hire in the city come only on order and the driver sits and sleeps in the sun until his fare is ready. His idea of driving, particularly if he be a young Dutch negro, is a constant jerking of the reins and cracking of the whip. The result is that the horses pursue an uneven fidgety flight, weaving from side to side, often perilously close to the edges of the narrow dyke roads. The cabmen are very honest withal and never attempt to overcharge. They speak English after a fashion, as do most of those with whom one comes in contact there, and if their fare does not have change with which to pay, they suggest "to-morrow I come" and cheerfully depart.

There are no electric lights, but there is a gas plant, the streets being lighted until 10 o'clock when the moon does not shine. The whole city goes to sleep at half-past 9 and begins business at daylight. From 12 to 3 the shops are shut, including the bank and postoffice, and breakfast and midday siesta are decorously observed. The drinking water comes from Heaven and is caught in huge cisterns that adorn every backyard. It is filtered for table use and if the visitor desires, boiled and kept in cool

crocks in unfailing supply. There are also several public wells sunk in a sandy reef that runs through the city, into which the river water filters. They are always full. There are no elevators in the office buildings, no skyscrapers, subways, or elevated roads, and the police are courteous black gentlemen, clad in heavy blue woolen uniforms which they wear with much pride and perspiration.

The streets are macadam, covered with beach sand and are uniformly good. Many of them are very beautiful with their rows of Royal Palms or, like Herrenstraat, shaded by a double row of branching mahogany trees. The shops are good and the only lack in the city is a Carnegie library. In spite of its primitiveness the place is curiously cosmopolitan. Good and bad samples of all nations on the earth are gathered here but not in sufficient number to act as an unwholesome leaven for the sturdy, thrifty Dutch possessors of the land. People call the Dutch slow, but most people simply repeat what some one else has told them. My experience with the Suriname Dutchman leads me to state emphatically that anything he promises is done with a quiet promptness that is beyond praise.

The little hotel at which we stopped fronted on one of the main streets, facing an avenue of royal palms that terminated in Herrenstraat. It was centrally located, very tiny, exceedingly clean and well managed. It was established by an English widow, who died and bequeathed it to a daughter and niece, neither of them over eighteen years old. With the aid of excellent servants they ran the house well and their rate of \$2 a day was certainly most reasonable in view of the wholesome food and service.

The Dutch negroes who live in the settlements speak Dutch with the same curious softening of the harsher syllables that is apparent in the English speech of North American negroes. They call themselves Dutchmen and are dignified, sluggishly industrious, and imitative.

The Suriname Dutch are not only a very courteous people but have a fine sense of humor. They still smile over the American yacht that entered their waters and when the cannon on the little fort bade it stop, replied with a courteous salute



GOVERNMENT SQUARE, PARAMARIBO.

[Palace of the Governor on the Right.]



FOREST PATHWAY WITH YOUNG "HEVEA GUYANENSIS" IN FOREGROUND.

from its own little brass muzzle-loader. Then when a second shot was fired, the yacht dipped its colors in acknowledgment of the extraordinary honor paid by observant officials. According to regulations a third gun, that one shotted, should have been fired point blank at the offender and would have had

the backing of International Law. But the visitor was an American, good natured and ignorant, and so they good humoredly let it go up the river and come to anchor without damage.

There are many newspapers in Suriname—so called "daily's"—six of them. I was not able to fathom the exact date of publication as they seemed to vary. As nearly as I could figure it, one came out Monday, none were published Tuesday, two appeared Wednesday, and for the rest of the week they either appeared singly or in bunches, as editorial enterprise directed. I was interviewed by one of the newspaper men, but he certainly misunderstood some of my remarks. It was not my intention to give him the impression that my visit to Dutch Guiana was for the purpose of cornering the rubber and balata market. I had kept that a profound secret, even from myself, and how he discovered it I have no means of knowing. The newspaper story made me very popular, however, and I had many opportunities to purchase bushlands, going-to-be plantations, and gone plantations. One kindly old black Dutchman looked me up very early one morning and after profound apologies deferentially suggested that I loan him money with which to purchase an estate which he would sell back to me at a very satisfactory figure to himself, once the papers were passed. He was perfectly satisfied with my refusal, his reward being in his consciousness of being a man of business and handling large affairs just as a white man would.

The visitor to Paramaribo by steamer may have twenty-four hours in the city, if he so elect. The steamer makes a landing in the morning at the company's pier, where it discharges passengers and cargo. That afternoon or evening, at the captain's pleasure, it drops down stream to Nieuw Amsterdam to meet the banana barges, getting away the following afternoon about four. Passengers who wish to stay over one night in the city may join the steamer by private launch or by the mail boat that leaves at 2 o'clock. I am writing this in detail as no one on the Dutch boats seems to know this, or, at least, no two know it alike, and it sometimes makes a difference in one's planning if one knows whether a boat stops twenty-four minutes or twenty-four hours.



"HEVEA GUYANENSIS" WITH RAIN GUARD OVER TAPPED SURFACE.



HERRING BONE TAPPING, "HEVEA GUYANENSIS."

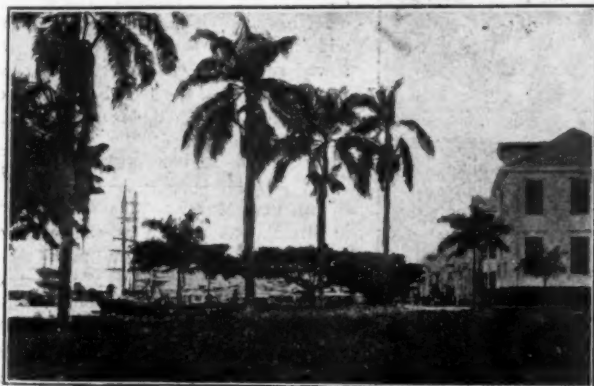


FRUIT SELLER.

The good humored inertness of the black Dutch is constantly making itself felt, and the most casual observer cannot fail to note it. For instance, a colony of black Dutch lived in houses belonging to a planter, and paid no rent. They did not refuse to pay, not at all. Every time they saw the owner they not only acknowledged their debt, but took pains to hunt him up to assure him that they had not forgotten the obligation, and, incidentally, to borrow a little more for present needs. He finally put the matter in the hands of a sheriff, telling him to evict them at once, and the official departed, determined to do his duty at whatever cost. He,

by the way, was a black man, and they are the severest of all government officials. Arriving at the settlement, he called on the people, and announced to them that he was about to evict them, and by force if necessary. They agreed that it was only just and proper, and sat and smoked and watched him with great respect. His dignity would not allow him to handle their effects himself, and he therefore decided to remove the shingles from their roofs so that they would no longer be habitable. After some bargaining the debtors began to remove the shingles for him, he paying them two florins each in advance. By mid-afternoon the roofs were stripped, the shingles neatly piled by the roadside, the laborers paid and the official had departed for town. As soon as he had gone, the homeless ones calmly nailed them on again, and contentedly awaited another profitable eviction.

One of my friends in Paramaribo wanted a trench dug, and bargained with an honest Dutch negro to do the job for a certain number of florins. The price being agreed upon, the negro demanded one-half his pay in advance (as is customary), which was readily granted. Then he started off to get his shovel, and, as it was Friday afternoon and rather late to begin on a new job, he did not return. The next day being Saturday, and as he had money in his pocket, he could not be expected to work, and therefore didn't. The day after being Sunday he could not work without outraging his own and his neighbors' religious principles. On Monday he came around to inform his employer that he



HARBOR VIEW, PARAMARIBO.



WITCH BROOM.

couldn't work the day after a holy-day (another custom), but that the trench would be begun Tuesday morning, and it was, and finished in due time.

There were but few mosquitos in Paramaribo while we were there, but in certain parts of the bush they are very plentiful, and malarial fevers are the result. They even tell a story of a Dutch sailor up in the bush committing suicide because the mosquitos tormented him so. While the colony is uniformly healthy, and Paramaribo, for a tropical city, wonderfully so, it has its share of diseases. The excellent city hospital has 600 to 700 patients, and the study of *elephantiasis* and the hookworm disease is constant and thorough.

I am more and more impressed with the conviction that a man can go almost anywhere in the tropics and continue in good health if he is careful about a few essentials. I have a friend, a case hardened, experienced tropical adventurer, who took an American mining engineer up into the Guiana bush. They both got fever very badly, and the engineer in his delirium came very near killing his companion. I went all over the same ground without a touch of illness. Meeting the adventurer later, I resolved to discover, if possible, the reason for their suffering. A very little questioning developed the fact that they carried no mosquito bars, and that they drank unboiled bush water when they were thirsty. In other words, they did not take ordinary proved precautions, and they got what they deserved.



CARRYING A REJECTED BUNCH HOME.

One day I had a call from the Government Inspector of bananas, who is not only an enthusiastic planter of *Hevea* rubber, but, being the father of the Government Forester, knows much about the wild *Hevea*, the *Guyanensis*, that is quite plentiful in the hinterland. He had many samples of rubber collected from this tree, and also much information concerning it.

The presence of the *Hevea Guyanensis* has long been known, for it was identified as far back as 1762, by Aublet. Very little attention was paid to it until in 1906, when the man who was my visitor found twenty or more large trees in the gold fields near Hoolhoven placer. He at once had them tapped and the rubber examined. It was found to be short of fiber and rather sticky, although the *caoutchouc* content was large, 88 to 94 per cent.

To the casual observer the tree would appear to be the same as the *Brasiliensis*. The leaves, however, are much smaller, and the leaf ends more rounded with a short point, the nuts are smaller also. An examination of the blossom, however, will absolutely identify the tree. The tree is called by the Carib Indian "mapalapa," and the women use the dried seeds for ornaments. The trees begin to bud in September and flower up to

December. As far as has been observed the tree grows slower than the *Brasiliensis*. It is not very plentiful, as a rule, and is oftentimes found in swampy places.

The Government Forester started men out to "cruise" for trees, and in one section located 1,120 of them. The year following, 1910, he discovered something like 1,000 more. The cost of locating the trees was something like 26 cents per tree. Under government supervision, he started tapping them after the most approved methods. The herring-bone system was generally employed—and coagulation effected by the use of acetic acid. The trees were tapped every two or three days, one man tapping from 60 to 80 of them. The average production per tree was from 10 to 15 grams, or .35 to .53 ounce. The latex varied considerably, containing 27 to 54 per cent. of rubber. Of 500 trees tapped the yield was 80 kilos or 176.4 pounds of dry fine, or 160 grams, equal to 5.64 ounces per tree.

Of three analyses of this rubber made in Holland, one chemist found nearly 9 per cent of resin, another a little over 3 per cent, and the third something over 2 per cent. Opinions as to its value varied. One firm of European rubber importers called it very poor; another declared that it was the equal of Para rubber, except that it was not quite as strong. Rubber manufacturers in Holland reported favorably on it, while German manufacturers did not think so much of it. Carefully analyzing all the reports the Government Forester came to the conclusion that the market value was about the same as Ceylon plantation rubber. Later experiments developed difficulties in coagulating. One attempt to overcome this was by adding vinegar to the latex and then boiling it. The result was a very spongy rubber mass.

Whether the trees show wound response in the same degree as do the *Hevea Brasiliensis* has not yet been established. They certainly do show wound response, but after a time the flow seems to diminish. Smoking the rubber was also attempted, "maripa" and "paramaka" nuts being used to produce the smoke. Rubber thus coagulated showed little nerve. Treating the latex with smoke from green wood produced a better result.

The forest was cut away in many places around the mature trees, and a great many seedlings sprang up, which appeared to be growing very nicely, although not very rapidly. The government has also cleared strips two meters wide in various parts of the forest, and sowed seeds of the *Guyanensis* in these partial openings, the idea being to keep the rankest growth down, and give the young trees a chance.

[TO BE CONTINUED.]

THE new Madeira--Mamoré Railway, in Brazil, has arrived at the stage of maintaining a regulation time table, which is printed in the local newspaper very much in the style of such information in newspapers elsewhere. The latest issue of this time table relates to running the trains from Porto Velho, the starting point, up to 152 kilometers.



TAPPING A WILD *HEVEA GUYANENSIS*.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

I DO not remember a previous occasion when a raw rubber has had an original paper to itself in the proceedings of the Society of Chemical Industry, and I have read with interest in its *Journal* of November 30 the paper on Guayule Rubber read by Mr. Harold Van der Linde at the Canadian section, of which

GUAYULE RUBBER.

he is a past president. The paper naturally consisted of a general resumé of the industry as now existent, rather than a dissertation upon the present and the future of the Inter-continental Rubber Co., with which important concern the author is now associated. The interesting statement was made that though the crude rubber compares with other soft and resinous brands, after vulcanization its value is much enhanced, and that it can then compete with high grade non-resinous rubbers. This change after vulcanization differentiates it from other resinous rubbers, which do not appreciate to the same extent by vulcanization. I have not given the author's exact words, but rather what I gather he intended to convey. He prophesies that this special advantage of guayule will be testified to in the higher price obtained in the future. This is not the only point of interest as regards the future; the main consideration would seem to be whether the industry will have any future. I am not attempting myself to set foot on this holy ground of contention, but there are men of position who aver that the industry will die out four or five years hence from want of raw material. Mr. van der Linde is certainly not among the pessimists, as although he says that not much is known as to the growth of the shrub or the age at which it arrives at maturity, there will be raw material for many years obtainable from the ordinary re-growth. It is somewhat surprising to read that about 20 per cent. of the world's total output of rubber in 1910 was derived from the guayule shrub.

THE most recent statistics of the Canadian rubber trade in regard to imports of rubber goods testify to the increasingly strong

PROOFING TRADE WITH CANADA.

position held by Great Britain with regard to waterproof cloth and clothing, the value being $4\frac{1}{2}$ times that from the United States, other countries contributing merely a trifling amount. These statistics are ten months old, but inquiries in the trade show that this business continues brisk, so we may look to much the same if indeed not a better result in the forthcoming returns. One can quite understand that the conditions of life of such a large number of the inhabitants of the country districts render a good waterproof coat a matter of necessity. The formerly large business done in carriage aprons has, I am told, suffered a good deal in recent years, owing to the automobile. The carriage apron of mackintosh cloth was a more or less ornate and expensive article, easily damaged by oil, and it is not in favor with the motorist. The late autumn is a busy time with proofers on this side who have important Canadian connections—firms, for instance, such as P. Frankenstein & Sons, of Manchester—as the pattern books for the forthcoming spring trade have to be got out. This season also sees Canadians who have come over to buy cloth and make arrangements with proofers to finish it and deliver in January or February. The statistics do not distinguish between finished clothing and proofed cloth in the roll, and I am not in a position to do any accurate dissection. As a general rule, however, it may be said that the lower-grade material goes out in the form of clothing and the higher as proofed cloth. The duty on the cloth is, I think, 20 per cent., and on the clothing 35 per cent., and though there is really not very much in it it is found that the purchaser of a cheap coat does not notice the impost as much as the buyer

of the higher grade does. With regard to prices, although there is now in existence a Waterproof Garment Manufacturers' Association, this has had more to do with the regulation of the wages to be paid the operators, etc., for certain classes of work, than with fixing sale prices. Certainly earlier in the year two notices were sent out regarding rises in price, but no notice of reduction of a like official nature has transpired since fine Pará fell to the 6 shilling level.

THIS property, which is situated in Rose street, West Gorton, Manchester, was put up for sale by auction on December 6.

STANDARD RUBBER WORKS.

The first bid was £500, which was raised to £1,550, at which it was withdrawn, as being considerably under the reserve price. The land and buildings without the machinery and fittings were then offered, but no bid was forthcoming. If not sold shortly by private treaty, the property will be offered piecemeal. The Standard Works are the property of Messrs. George Littlewood & Sons, Limited, now in voluntary liquidation, and the sale was by instruction of the liquidator, a Birmingham official. Messrs. Littlewood are a well-known Birmingham firm of wheel makers, especially for perambulators, and the business carried on at the Standard Rubber Works has been mainly in connection with perambulator tires, though rubber heel pads have been an important product in recent years. The freehold land was comprised in the sale and most of the rubber machinery on offer was of modern installation and by well-known makers.

THIS company, which commenced manufacturing about two years ago, is located at Cambridge street, Broadford road, Man-

THE REVOLITE CO., LIMITED.

chester. This Cambridge street, I may say, is at a considerable distance from Cambridge street, Hulme, Manchester, where the works of Messrs. Charles Macintosh & Co., Limited, are situated. The main business of the Revolite company is in rubber heels, though sundry other molded articles are also turned out. Considering the great competition there is nowadays in this rubber heel business, both from small and large rubber works, it says something for the wearing capacity of the Revolite "Harrier" heel that it has been found necessary to considerably enlarge the capacity of the works to keep abreast of the demand.

ALTHOUGH three or four reforming patents have been at work during the year, the demand for scrap rubber has not been such

RUBBER SCRAP.

as to cause any definite rise in price, nor can it be said that the dealers have experienced any difficulty in getting supplies from customary sources, owing to the consumers sending their scrap direct to the reforming works. Perhaps this may be due to the delay in turning out untold tons of reformed rubber per week, an eventuality we were led to expect a year ago. The scrap rubber market never shows any close sympathy with the raw rubber market in the matter of prices, and the variations in the prices of various qualities during 1910 were nothing like so pronounced as in the case of raw rubber; indeed, the fluctuations were within comparatively narrow limits. This occasioned surprise to those having old rubber to sell. Motorists in particular seemed to think that there was a good business to be done in disregarding tires at prices approximating to the shillings per pound which they saw in the paper was the value of crude rubber. As soon, however, as a deal was commenced disillusion quickly followed. The price of old automobile tires at New York, as quoted in THE INDIA RUBBER WORLD of November 1, is 8 cents per pound, or about £36 per metric ton. This is for car-

load lots. In England for ton rate the price would be about 7 cents per pound, or £30 5s. per long ton. Now, the average motorist only has a few tires to dispose of at a time, and anyone who undertakes the collection of the 130 to 150 tires which go to the ton is not in a position to pay more than a shilling or two for each tire. Frequently when these few shillings are offered no deal is effected, as the tire owner thinks he is being cheated. Still, however, the collection is brought about, and whatever the profit may be the bulk of the tires eventually find their way to reclaiming works, such as the North Western, where I have seen a huge heap of them.

I AM frequently asked the question, "What is the address of your paper?" and since the move some years ago to the dangerous-looking skyscraper in Broadway, I have accustomed myself to answer straight away. I could never feel certain off-hand about the previous address, and now we have got to something even worse to carry in the mind. I often wonder whether New Yorkers remember their own addresses, and whether cabmen are expected to carry them in their heads after leaving the railway station or the club. I am not going to attempt any such thing, and by way of being always ready with an answer I have written THE INDIA RUBBER WORLD's new address plainly on some pieces of cardboard, one of which is put in each suit of clothes.

THE CHANGE OF ADDRESS.

RUBBER CONDITIONS IN PERU.

THE government of Peru is seeking by a liberal policy to encourage the cultivation of rubber trees. A law has been approved under which the government will pay a premium equivalent to about 1 shilling for each rubber tree grown on a plantation when it has reached the age of 3 years. It is asserted that under the favorable conditions which exist throughout the Peruvian *montaña*, capital carefully invested in rubber planting there has practically a government guarantee of repayment at the end of three or four years, while the investor would have his plantation as clear profit.

Commander Olivara, an officer in the Peruvian navy, has been intrusted by his government with the work of inspecting the rubber lands on the *montaña*, and he encourages the investment of foreign capital in rubber enterprises. Thus far, however, little foreign capital has been so employed. It is stated that all the companies which are now engaged in exploiting rubber lands in the republic have made substantial profits.

There remains, however, the difficulty of transporting the rubber, when collected, to the Peruvian ports on the Pacific—and it is a long way to seaboard by way of the Amazon. Although the distance which divides the Pacific coast from the *montaña* is comparatively short (about 200 miles), its great difficulty, from an engineering point of view, arises from the necessity of crossing the Andes. But the government already, says *The Financial News* (London), has signed a contract for extending the railway now extending into the interior from the port of Callao, with the intention of making connection with the river Ucayali, one of the streams which helps to form the Amazon. Such a line would put the Pacific coast in close touch with the Peruvian system of waterways on the other side of the Andes, and thus enable Peru to retain the great part of her rubber trade in her own territory.

PROFITS IN WASTE RUBBER.

IN their annual review of the waste rubber market Theodore Hofeller & Co., of Buffalo, New York [*Boston Commercial Bulletin*, January 7] comment:

"Our faith in the future of the old material business does not blind us to the fact that there are some conditions which are not right. Nearly every line of business eventually discards

something which must find its way to the dealer in old materials, and as the volume of all other lines of business in the world expands, the business in old materials increases accordingly. If this inference is correct, it must follow that the old material which finds its way to market must each year be constantly increasing. Because of the usual abundance of old material, the dealer in these goods is generally satisfied with the volume of business, but he often complains, and with reason, that his margin of profit is too small. He usually obtains full market price when he sells, but the trouble appears to be that in his eagerness to buy, his buying price is too close to the selling price to leave a reasonable profit.

"We do not know whether a campaign of education is possible along these lines, but comment can do no harm and may be productive of some good. We believe that in France, Germany and England, dealers in our line of business are more conservative and have in mind volume of profit rather than volume of business. We are decidedly opposed to unlawful combinations in restraint of trade, but we do believe in intelligent competition that has the courage to let someone else have the business if it does not yield a fair return on the investment.

"We believe there is plenty of old material in this big world of ours to satisfy everyone. What say you fellow dealers? Would we not all be more contented if we were less keen on the volume of our business and more keen on a reasonable margin of profit? We believe that the future stability of the business rests upon this point."

GUTTA-PERCHA GOODS PRICES.

[FROM "GUMMI-ZEITUNG," BERLIN.]

BY gutta-percha goods manufacturing circles our attention is directed to an error that frequently occurs among customers. It is supposed by some that rubber goods and gutta-percha articles are made from the same raw material, or that gutta-percha is only a variety of raw rubber. The consequence is constantly repeated enquiries as to why the selling prices of gutta-percha goods are not reduced in harmony with the lower quotations for raw rubber. In regard to this, the trade should be distinctly informed that raw rubber and raw gutta-percha are two completely different materials, and that the markets for these two raw materials are in every respect entirely independent of each other. While the speculative operations of the spring of 1910, in the course of which the asking price for raw gutta-percha increased to the extent of about 300 per cent. of the normal price, have fortunately ceased, the quotations, particularly of the medium and lower grades of raw gutta-percha, are still so high that a reduction in the present selling price is entirely outside of the realms of possibility. With the prevailing very large demand and the exceedingly scant supply, all the conditions for a cheapening of gutta-percha, within a visible period, are absent; the prices show rather a decided tendency towards a further increase. In any event, the situation of raw rubber cannot in any respect be connected with that of gutta-percha, and all such references are based on error. Gutta-percha prices are established quite independently: according to the present situation a reduction in these goods is even less likely than in rubber.

THE GENERAL TENDENCY TOWARD SPECIALIZATION is illustrated by our London contemporary, in dropping from its title several words long familiar there, leaving only *The India-Rubber Journal* to denote the field of the publication. Our own paper for ten years appeared under the heading INDIA RUBBER WORLD AND ELECTRICAL TRADES REVIEW. With the advance of time, however, the rubber interest has expanded to such an extent as to claim the undivided attention of the journals devoted to it, leaving the expansive electrical field to other specialized periodicals.

Tires at the 1911 Madison Square Garden Show.

IT is safe to assume that all new ideas and developments in motor vehicle tires and rims were exhibited at the eleventh annual automobile show in Madison Square Garden, New York City, which was held from January 7 to 21. It has become customary for the manufacturers of tires and rims, as well as those who produce the automobiles themselves, to wait for this annual show before announcing and displaying their latest improvements and departures from former models. With the show over, nothing radically new need be expected until show time comes around again.

This is, consequently, a most opportune and logical time to study the present development of the rubber tire for motor vehicles and its rim. The permanency of the rubber tire for automobiles is unquestioned. There has been no little discussion of the possible use of steel tires, and these have gained a foothold in Europe, where they are fitted to heavy motor trucks. This is due largely to the stand taken by the French government, which grants subsidies only to trucks so equipped. As yet the steel tire has not appeared in this country for use on motor vehicles, and if it does its use is certain to be limited to the heaviest motor trucks, the speed of which would therefore be limited to about eight miles an hour. With this permanency of the rubber tire for motor vehicles assured, the industry has continued its rapid growth. New companies have entered the field, and the old companies have increased their manufacturing facilities. There are now ninety-four concerns listed as being engaged in the manufacture of motor vehicle tires, and fifty-three who are producing rims. Thirty-five are listed as making inner tubes, quite a few of which are included in the ninety-four making tires.

A careful study of the pneumatic tires exhibited at the recent show in New York did not reveal very much that is new. The chief principles necessarily are alike and unchanging, and shapes and sizes have become practically standardized. Tires now differ mainly in respect to quality, that is, in respect to the materials and methods used in their manufacture. The amount of rubber and of fabric employed, and the thickness of treads and side walls are the principal points of difference observable by the semi-critical eye. The only real way to distinguish between the various makes is by the non-skid treads. Each particular make has a tread pattern of its own, and these differ radically. They are as different, for instance, as the prominently protruding and irregularly arranged knobs of the Morgan and Wright anti-skid tire, and the cup-like depressions in the Pennsylvania vacuum tread, or the multitude of rubber surfaces of the Ajax to the steel studs of the Michelin. The Diamond tread has a steel studded diamond shaped grip, and the Firestone company continues its design with the name "Firestone" raised from the tread and repeated diagonally around the center contact surface. The Goodyear No-Rim-Cut has a surface of diamond-shaped blocks, the sharp edges of which grip the ground, and the base of each block is larger than the top to prevent the pulling off of the blocks, the Goodrich steel studs, the Empire a raised checker tread, and the Continental a traction tread, which is an all-rubber non-skid, with four rows of longitudinal projections, the alternate rows being opposite each other, high in the center and tapering at either end to a line even with the surface of the tire. Other non-skid designs shown were the Fiske, Rutherford, Goodrich, Batavia, Jelco, Stein, D. C., Star, Miller, Prince, and Thermoid.

The only innovation in tubes is the Marsh trussed inner tube, a new production from Detroit. This tube resembles a large curled caterpillar, the trusses being not unlike accordion pleatings which, under the influence of inflation, are pressed tightly together, and thus present much greater resistance to punctures. This tube is not claimed to be puncture proof, but to be non-

leakable in the event of a puncture. The theory of this is that if one or more of the trusses is punctured, the hole will be immediately closed by edgewise compression.

In the development of tires for commercial motor vehicles there has been marked progress. This progress includes the advent of twin pneumatic tires for use on motor delivery wagons and light trucks, an increase in the number of companies making solid tires of the wireless type, and the introduction of demountable rims for use with solid tires, both single and dual. Twin pneumatic tires were shown by the Fiske and Michelin companies, and both advocate their use on large limousine cars as well as on light commercial vehicles. In fact, Michelin twin pneumatics were fitted to the rear wheels of one large limousine exhibited at the recent Importers Salon in New York. Large size single pneumatic tires have been successfully used on motor trucks up to one ton capacity, and this makes it safe to presume that twin pneumatics can be successfully used on two-ton vehicles. Their use permits a much greater speed than is possible with solid tires, and high speed is the important factor in a good many uses to which commercial motor vehicles are put. Both the Fiske and Michelin twin pneumatic are provided with quick demountable rims.

Firestone and Hartford are the two companies which have already placed demountable rims for solid tires on the market. The Firestone device comprises essentially a clamping flange and a retaining ring, the latter held in place by 14 nuts and bolts; when the nuts are removed the flange and, of course, the retaining ring are released, and rim and tire both may be removed and replaced by a spare rim and tire which it is assumed are carried for the purpose, and which are put on by merely reversing the operation. The Hartford demountable employs the principle of the wedge ring, provision against irregularities in wheel and band diameters being made by splitting it and allowing for clearances to permit of positive seating of wedges and to prevent springing of the rims while in use on heavy trucks. The beveled inner surface of the rim corresponds with the taper of the wedges, which latter are held in place by eight small lugs, secured by bolts passing through holes in the rim. A double wedge ring is placed in the center of the felloe band to form the inner seat for each of the individual rims where twin tires are used. The rim is designed for use with either single or twin tires, and may be applied to any wheel fitted for the standard types of side-flanged or side-wire tires. At least two other well known tire companies, the Continental and Morgan & Wright, are working on demountable rims for solid tires, and are likely to place them on the market in the near future.

In addition to the rubber block tire made by the Kelly-Springfield Company, there were shown, as usual, several cushion or semi-solid tires. The Swinehart and the Motz were the best known of these, in which the design of the central core is the essential feature. One of the new developments in this class is the United States tire. In shape it is frustum pyramid, the flattened apex of which is indented. The hollowed core also is of pyramid shape, and the base of the tire is split to increase the resiliency, which, of course, is claimed to rival that of pneumatic tires. Another is the Goodyear-Motz, made by the Goodyear Tire and Rubber Company. This tire is intended primarily for use on electric automobiles. By an ingenious combination of slantwise webbings, undercut sides and a unique double tread, the tire itself is rendered proof against punctures, blowouts, patching and tire troubles, and at the same time is said to give the easy-riding qualities of the pneumatic tires. The Goodyear-Motz tire, by reason of its extra traction and double tread, possesses excellent non-skid properties.

THE TIRE EXHIBITS IN DETAIL.

Ajax-Grieb Rubber Co. (Trenton, New Jersey).

The exhibit of this company embraced every type of tire it makes, in several sizes. The Ajax is a standard clincher pneumatic, and can be fitted to any standard rim. These tires are still sold with a guarantee to roll 5,000 miles.

REPRESENTATIVES.—William J. Grieb, president; J. C. Matlack, secretary; R. S. Ireland, sales manager. Branch managers: Edgar Storms, New York; F. S. Pierce, Chicago; H. M. De Silva, Kansas City; Charles E. Stearn, Atlanta; C. R. Van Auker, Detroit. Salesmen: E. D. Winans, J. I. Neville, W. Towne, S. H. Hoffman, and R. F. Clunan.

Batavia Rubber Co. (Batavia, New York)

The feature of the exhibit of this company was its Security non-skid tires. These have a surface with crosswise slots which do not meet at the center, thus leaving a rib to give the necessary strength to the edges. The regular tires, as exhibited by this company, show no departure from former types, and are of the wrapped tread case and pure gum inner tube type.

REPRESENTATIVES.—A. W. Caney, vice president; L. T. Vance, factory superintendent; Harry L. Graff, president Harry L. Graff, Inc. (sole distributors of Batavia tires); Horace S. de Camp, vice president Harry L. Graff, Inc. Salesmen: A. C. Sloate, W. J. Wilson, and Albert Olsen.

Century Rubber Trading Co. (Plainfield, New Jersey).

Two types of Century tires were shown, the wrapped tread and the anti-skid. In the Century tire the finest grade of Pará gum is used, slow cured and properly compounded to give greatest wearing qualities and the necessary pliability. The carcass is made extra heavy, of a special grade of coarse weave Sea Island duck. Every one of the eight plies of the Century tire is most carefully made—by hand where it is best—and the whole so cured and vulcanized as to prevent wrinkling, or separating of the plies. A special grade of gum is used, which permeates the whole tire fabric, making it at once homogeneous and flexible.

The Century anti-skid tire meets the exacting requirements of such a non-skid type in a practical way. This tread is extra heavy and divided into square blocks of rubber with beveled edges. These edges are hand cut and not molded, as is usually the case on non-skid tires. This makes the edges sharp and enables the tread to get a suction on the road surface, adding 50 per cent. to its effectiveness. This prevents slipping or skidding when running or turning corners up to a speed of twenty-five miles an hour.

REPRESENTATIVES.—D. H. Shay, president; E. H. Tucker, general manager; E. Greene, Cleveland; J. McGinn and C. D. Winslow, New York.

Consolidated Rubber Tire Co. (New York)

Two distinct types of Kelly-Springfield tires were exhibited by this company. These were the pneumatic in both the round tread, and Bailey anti-skid tread, and the sectional or block solid tires for commercial motor vehicles. With the usual attention which the heavy motor truck is now attracting, the Kelly-Springfield block tires received considerable notice. The advantages claimed for this type over the regular type of solid tire, easy to repair, non-heating and that the action or movement of the rubber is not continuous, thus adding to the life of the tire.

REPRESENTATIVES.—V. H. Cartmell, president; F. A. Seaman, secretary; F. E. Holcomb, general manager; O. S. Cook, general factory salesman. Branch managers: F. A. Kissell, Philadelphia; S. F. Hall, Boston; E. S. Roberts, New York. Salesmen: F. A. Oatman, J. B. Eberhardt, E. J. Cabaret, and J. P. Cahoon.

Continental Caoutchouc Co. (New York).

There were three distinct features at the Continental exhibit, the traction tread tire, the detachable, demountable rim, and the Revere solid tires. The Continental traction tread tires are built with the same careful attention to detail as regards quality and superior workmanship which has always kept the name of Continental famous. The numerous rubber studs cannot become loose, as they are integrally constructed and cannot separate from the body of the tire itself.

The Continental detachable, demountable rim has a flanged

band shrunk on the felloe, and upon this the rim bears. This rim is held in place by a series of eight clamps with wedge-shaped projections, which enter between the felloe band and the rim. The rim is prevented from slipping back and forth on the felloe by projections on its under side, which rest in recesses in the felloe. Bolts passing through the clamps and the felloe hold the tire in place. The Revere solid tire, as made by this company, is of the wireless type. The steel base dove-tailed with a hard rubber sub-base upon which is vulcanized the long wearing dependable Revere rubber tread, makes the three integral parts an absolute unit with the wheel.

REPRESENTATIVES.—J. M. Gilbert, general manager; O. S. Tweedy, general sales manager; J. H. Sheldon, eastern sales manager; E. E. McMaster, Detroit, western sales manager. Branch managers: E. H. Kidder, Boston; S. S. Poor, Philadelphia; C. A. Gilbert, Chicago. Salesmen: R. M. Hernandez, Chicago; J. C. Given, Philadelphia; J. C. Toomey and F. N. Broadhead, Boston. R. R. Drake, Chicago.

Continental Rubber Works (Erie, Pennsylvania).

The only tires exhibited by this company were those for use on motorcycles and aeroplanes. Although not entirely new, the aeroplane tires attracted much attention. The fabric is a special Sea Island fabric, which has been made up solely for this purpose. Instead of being made of the straight thread fabric, it is a woven fabric, and is especially made so that practically the same resiliency as a thread fabric is obtained, and in addition the tire is much less liable to puncture, and will prove more serviceable. The stock throughout is made especially tough, and the tire is provided with lugs so that it can be securely fastened to the rim. This company also exhibited a complete line of inner tubes, patches, and sleeves.

REPRESENTATIVES.—T. R. Palmer, president and general manager; W. J. Surrey, sales manager New York.

The Diamond Rubber Co. (Akron, Ohio).

The Diamond exhibit was a most complete one, and included pneumatic tires of different types, solid tires, aeroplane tires and motorcycle tires. In the pneumatic tire line this company displayed clincher, quick detachable, "bolted on," mechanical or Dunlop types, all fitted with Bailey smooth or grip tread. The Diamond motorcycle tires are made with a corrugated tread for general use, and a studded tread to prevent skidding. The Diamond company claims to have made the first aeroplane tires, and its product for this use combines extreme lightness with toughness and resiliency.

All Diamond solid tires, whether demountable wire mesh base, side wire or solid clincher, are now made spliceless. The argument is obviously that the tires cannot open at the splice and one possibility of weakness is thereby overcome. The wire mesh base tire is a leader in the Diamond group, having been made by this company since the earliest use of the motor driven vehicle for commercial purposes. It is a quick detachable solid rubber tire, requiring no special tools for taking off or putting on the wheel. Another Diamond type is the solid rubber clincher tire, manufactured especially for delivery cabs and other light commercial machines.

REPRESENTATIVES.—A. H. Marks, vice president; W. B. Miller, secretary; James A. Braden, advertising manager; G. R. Reynolds, sales department, Akron; J. Jordan, sales manager, and T. S. Lindsay, office manager, New York. Branch managers: C. Mathewson, San Francisco; N. Oliver, Buffalo; E. H. Fitch, Philadelphia; E. P. Weber, Boston; L. K. Rittenhouse, Pittsburgh; H. J. Woodward, New York. Salesmen: F. W. Suhr, E. J. Sear, and W. E. Hughes, Boston; W. B. Duvall and William Britton, Philadelphia; B. W. Snowman, George A. Davidson, H. C. Mills, W. B. Williams, Jr., C. D. Studebaker, W. F. Lyons, C. E. Parks, — Westlake (solid rubber department), — Hardy and P. E. Le Homidieu (hard rubber department), New York. Sub branch managers: J. A. Vassar, Brooklyn; F. A. Braden, Newark; G. E. Pfeffer and E. B. Williams, Albany.

Empire Tire Co. (Trenton, New Jersey).

This company exhibits its complete line of pneumatic tires for automobiles and motorcycles and its rim. The regular type of Empire tire is made with a raised tread. A new tire made by

the Empire company, known as the disk tread, has disks of fabric placed at intervals, which makes it a non-skid. The disks extend down into the tread, so that they cannot wear out before the balance of the tire is worn out. The disks are of fabric tightly wound, frictioned with high-grade rubber, and when the tire is cured, they become an integral part of the tire.

Where separate clamps are used for holding the rim in place, these are sometimes arranged so that they may be turned sideways when the nut is loosened, so that the nut and clamp need not be taken entirely off the bolt to remove the rim, and so become lost. Such an arrangement is used in the Empire demountable. In this rim the wooden felloe carries a steel band, which is flanged on the inner side of the wheel. The outside of the band is smooth, so that the continuous rim can be slipped over it into place. To this band are riveted eight L-shaped stirrups, extending down over the felloe. The bottom of each stirrup has a shoulder in which rests the end of a clamp, which is held in place by a bolt passing through it and the felloe. When the nut is tight the rim is held between the flange of the band and the upper end of the clamp. The nut has a collar over which the clamp rests, so that a few turns loosen the nut sufficiently to allow the clamp to be turned sideways, permitting the rim to be slid off.

REPRESENTATIVES.—Charles H. Semple, president; A. B. Cornell, secretary; E. B. Murray, treasurer; W. J. Whillock, sales manager. Branch managers: J. M. Shackleford, New York; Winslow H. Chadwick, Boston; E. B. McKay, Chicago; William H. Perrett, Detroit; C. H. Beardsley, Kansas City; Charles Weiland, Indianapolis; R. N. Paddock, Buffalo; E. B. Richardson, Philadelphia.

Firestone Tire and Rubber Co. (Akron, Ohio).

The feature of the Firestone exhibit was the demountable rims for pneumatic tires and also for solid tires. The latter is described in the main article. The pneumatic tire rim is of the separate clamp type. These are arranged so that the nut need not be taken entirely off. This is accomplished by using a clamp which presses against a wedge ring. The clamp has a slot through which the bolt passes, and the lower end rests on a shoulder of a plate or stirrup fastened to a felloe. When the nut is loosened, the lower end of the clamp can be lifted from the shoulder, and will then drop down out of the way, allowing for the removal of first the wedging ring and then the rim. Other rims of the type have the bolts so arranged that when the nut has been loosened a certain number of turns, the wedge lug is automatically turned out of the way of the rim to allow of its removal, and is again automatically turned up into clamping position when the nut is tightened.

The Firestone exhibit also included pneumatic tires of the smooth tread and anti-skid types, and solid tires of the side wire type.

REPRESENTATIVES.—H. S. Firestone, president and general manager; Will Christy, vice president; R. J. Firestone, sales manager; F. C. Blanchard, assistant sales manager; J. F. Singleton, advertising manager; A. P. Cleveland, show manager. Branch managers: W. R. Walton, Philadelphia; J. V. Mowe, Detroit; F. H. Martin, Chicago; T. J. Glenn, Boston; C. E. Jackson, Pittsburgh. C. H. Gerhold, O. J. Abell, W. F. Bailey, W. F. Ridge and P. B. Bosworth, Akron.

Fisk Rubber Co. (Chicopee Falls, Massachusetts).

The adaptation of its regular product, in the shape of a dual pneumatic tire on a renewable rim for commercial motor vehicle use, was easily the feature of the Fisk exhibit. The Fisk demountable rim, which is used on both single and dual pneumatic tires, has the felloe beveled off through half of its width at an angle of about 45 degrees. Upon the felloe fits a band, which conforms in shape to it and which bears a shoulder upon the side opposite to the bevel. This band is held in place by bolts which pass through the felloe, the band, and lastly a continuous wedge ring which has a similar shoulder. The wedge ring is thus forced up the beveled side and the shoulders grasp a U-shaped channel ring to which the tire is fastened. The web band seen in the older models has been done away with, allowing the use of longer spokes in the wheel and making it lighter.

REPRESENTATIVES.—H. T. Dunn, president; John C. Cole, vice president; H. G. Fisk, secretary; G. A. Ludington, factory superintendent. Branch managers: Claude Pratt, Chicago; Fred K. Ayers, Boston; W. J. Kearny, Toronto and Montreal; C. H. Buchman, Providence; J. P. Ripley, Baltimore; L. J. Gilchrist, Philadelphia; J. B. Cothran, New York; A. G. Bolster, Syracuse. New York salesmen: George A. Campbell, Milton R. Brown, George L. Simpson, Walter W. Adams, Louis N. Mansuy, and C. A. Tremmel.

G and J Tire Co. (Indianapolis, Indiana).

Tires of both the smooth and Bailey tread types to fit Clincher, Dunlop and Q. D. rims were shown by this company. G and J tires were also shown fitted to the various standardized types of quick detachable rims, the patents of which are now held by the United Rim Co.

REPRESENTATIVES.—B. C. Dowse, president; R. W. Wood, treasurer; H. A. Githens, sales manager; G. H. Hamilton, assistant sales manager. Branch managers: F. A. Drake, Philadelphia; H. A. Harmer, Chicago; A. L. Hasey, Boston; Marcus Allen, New York. Distributors: H. G. Martin, Brooklyn; Frank Berrowdin, Philadelphia.

B. F. Goodrich Co. (Akron, Ohio).

In addition to its regular line of pneumatic tires for pleasure automobiles, the B. F. Goodrich Co. displayed a number of its solid tires, both single and dual, which are of the side wire type. This company, by the way, advocates the use of pneumatic tires on commercial motor vehicles up to one ton capacity.

REPRESENTATIVES.—B. G. Work, president; H. E. Raymond, second vice president; W. O. Rutherford, assistant to second vice president; A. J. Wills, sales manager, pneumatic tires; S. V. Norton, sales manager, solid tires; W. H. Allen, factory manager; H. K. Raymond, assistant general superintendent. W. H. Yule, general manager of The B. F. Goodrich Co. of New York; E. A. Bedell, assistant general manager, New York; T. A. Aspell, manager solid tires, New York; W. R. Kay, manager motorcycle and bicycle tires, New York city, Virginia, and North Carolina. Salesmen solid tires: C. E. Anderson, New York, Pennsylvania, Virginia, and North Carolina; G. A. Walters, New York, Massachusetts, and Connecticut; J. A. Reed, New Jersey and Pennsylvania. Salesmen pneumatic tires: E. W. Bonham (head salesman), New York city; A. F. Schober, New Jersey and Pennsylvania; Ray Rhync, upper New York; J. F. Haire, Connecticut and Massachusetts; J. H. Groth, New York city and Staten Island; W. A. Coles, Brooklyn and Long Island; R. W. Decker, North Carolina and Virginia.

Goodyear Tire and Rubber Co. (Akron, Ohio).

This company has made a specialty of solid rubber tires and these naturally attracted the most attention at the show. These tires have the retaining wires imbedded in a hard rubber base or core, which is united by a Goodyear process to the soft rubber tread, making them practically one piece.

REPRESENTATIVES.—F. A. Seiberling, president; C. W. Seiberling, vice president; G. M. Stadelman, secretary and sales manager; P. W. Litchfield, factory superintendent; L. C. Van Bever, vice president of the Canadian branch; W. E. Kavanaugh, factory superintendent of the Canadian branch; W. D. Shilts, manager automobile tire department; S. F. Falor, manager bicycle tire department; H. B. Hamlin, manager solid tire department; L. C. Rockhill, manager aeronautic supplies. Branch managers and salesmen: C. W. Martin, Atlanta; J. B. Maus, E. C. Neubauer, and J. C. MacFadyen, Akron; E. F. Jackson and R. P. Dowse, Detroit; A. F. Osterloh, Chicago; F. W. Powers, Washington, D. C.; H. G. Fittler, Philadelphia; W. T. Teagan, William Tenzler, I. W. Penniman, and E. B. Sigerson, Boston.

Hartford Rubber Works (Hartford, Connecticut).

Pneumatic tires of various types, solid tires of the center wire type and demountable rims for these solid tires, and which are described in the main article, comprised the exhibit of the Hartford Rubber Works. This company claims to have made the first endless solid tire and its product has long been favorably known to users of commercial motor vehicles.

REPRESENTATIVES.—J. D. Anderson, president; E. S. Benson, secretary; C. B. Whittlesey, factory superintendent. Branch managers: E. S. Roe, New York; N. R. Barnes, Philadelphia; Chase Sangmaid, Boston; O. S. Johnson, Buffalo; W. T. Powell, Chicago. Salesmen: N. Brown, A. L. Cruden, E. H. Fahey and J. Skelley, New York; E. H. Johansen, E. L. Duffee, and H. Kornis, Philadelphia; G. D. Niles and C. Havener, Boston; S. N. Keller, Buffalo; W. H. Reed, M. C. Stokes, C. Clark, E. S. Edwards, James Morgan and F. Kesser, Hartford.

Michelin Tire Co. (Milltown, New Jersey).

On account of their remarkable performance on racing cars, the Michelin pneumatic tires created much interest. The anti-skid tires were recognized by many as old friends, for these were among the first of the kind to be placed on the market. The novel feature of this exhibit was the twin pneumatic tire.

The Michelin demountable rim, as shown, remains unchanged since it first appeared four years ago. Upon the felloe of the wheel is a steel band which is bent at right angles over one side of the felloe and on the other side is bent upward to hold the rim. Clamps having the usual wedge-shape projection, which is inserted between felloe band and rim, hold the rim firmly in place. In all of these it is necessary to remove the nuts entirely from the bolts to change rims.

REPRESENTATIVES.—Hovet Michelin, vice president; R. E. Gloss, treasurer. Branch managers: J. Atwell, New York; L. H. Fiske, Boston; C. W. Scott, Philadelphia; J. S. Scoville, M. W. McKenzie, and H. C. Young, Milltown.

Miller Rubber Co. (Akron, Ohio).

Pneumatic tires and inner tubes comprised the exhibit of this company. Miller tires are wrapped tread construction. The rubber is firmly embedded in the meshes of the layers of fabric which form the walls and carcass of the tire. The tough rubber tread is vulcanized to the carcass, presenting a surface which will endure the greatest possible amount of punishment and permit the greatest possible speed.

REPRESENTATIVES.—William Pfeiffer, general manager; N. B. Quick, New York, branch manager; I. W. Hill, New York; H. L. Cooper, Detroit.

Morgan & Wright (Detroit, Michigan).

The exhibit of this company was devoted largely to pneumatic tires for automobiles and motorcycles. In their Nobody Tread tires Morgan & Wright believe they have the best non-skid tires. This tire is designed to bring the greatest possible length of diagonal projections in contact with the roadbed at one time.

REPRESENTATIVES.—A. I. Phelps, president; J. Weston, sales manager; W. B. Hobbs, New York, branch manager. Salesmen: A. Windover, Connecticut; G. Gallard, New Jersey; W. H. Waters, Long Island; E. Spencer, New York; E. L. Reid, New York city and Brooklyn; J. Tower, New York exports.

Pennsylvania Rubber Co. (Jeannette, Pennsylvania).

In addition to its excellent line of pneumatic tires, which include a plain tread, a vacuum cup tread, a wrapped tread, a flat tread, and a steel studded tread, the Pennsylvania Rubber Co. exhibited the Polack solid rubber tires, the manufacture and sale of which it has undertaken in this country. The Polack tire is a foreign product and is of the wireless type, which is now preferred abroad.

REPRESENTATIVES.—Herbert Du Puy, president; C. M. Du Puy, vice president; George W. Shirely, secretary; H. Wilfred Du Puy, treasurer; Seneca G. Lewis, general manager; G. C. McCullough, New York branch manager. Salesmen: Fred Crebbin, Jr., S. T. Waterman, Dan J. Nally, and D. Dudley F. Yard, New York.

Republic Rubber Co. (Youngstown, Ohio).

At its booth the Republic Rubber Co. featured its staggered tread auto-skid pneumatic tire, and its solid tires for motor trucks. The latter is of the cross wire type and is made of one piece of rubber; that is—the tread and base portions are one and inseparable. The base of the tire is made to conform to the inside of the clincher flange rim, but somewhat wider than the inside of the rim. Through the base of the tire, cross wires are inserted transversely. These wires are spaced about 1½ inches apart and so placed that they effectively stiffen the base of the tire and make it impossible to pull the tire out of the clincher rim.

REPRESENTATIVES.—Thomas L. Robinson, chairman board of directors; J. F. McGuire, president; L. J. Lomasney, vice president; L. T. Peterson, second vice president; Harry Young, manager tire department; Samuel

Rigdon, manager pneumatic tire department; B. C. Swinehart, manager truck tire department; John Kelley, Chicago branch manager.

Shawmut Tire Co. (Boston, Massachusetts).

Shawmut wrapped tread pneumatic tires, of both the clincher and quick detachable types, were shown at this exhibit. The former is made with a soft, pliable bead to permit it to go over the flange of the rim as the tire is applied and the latter has a stiff fabric reinforced bead.

REPRESENTATIVES.—W. G. Page, sales manager; W. E. Colt and Herbert Rydstrom, salesmen. G. W. Kayton (vice president) and Leonard Veith (secretary and treasurer) of the Baker Sales Co. (New York), sole agents for New York and vicinity.

Star Rubber Co. (Akron, Ohio).

Well known as manufacturers of general rubber goods, the Star Rubber Co. made its first exhibit of automobile tires this year. The company is now confining itself to making pneumatic tires by the wrapped tread process. Its exhibit was very complete and attracted much attention.

REPRESENTATIVES.—F. E. Duff, president; C. D. Downing, sales agent; Ronald Downing, city salesman.

Swinehart Tire & Rubber Co. (Akron, Ohio).

Both pneumatic and solid tires were shown at the Swinehart booth, although this company is devoting its principal attention to the latter. In the base of the Swinehart solid tire are a number of layers of fabric impregnated with rubber which vulcanizes to the tire proper. The fabric prevents any stretch in the base of the tire and eliminates buckling, one of the most destructive faults of solid tires. Transverse rods are molded into the rubber at the widest point of the clinch. The base of the tire is made to fit the clinch perfectly, and also large enough to be slightly compressed when the flange is in position on the wheel.

REPRESENTATIVES.—W. W. Wuchter, president and general manager. Sales managers: C. W. Moody, Akron; F. D. Wait and J. W. Cully (assistant), Philadelphia; A. J. Green, Boston. Branch managers: S. G. Andrews, Detroit; C. O. Dole, Chicago; E. O. Hoopengartner, New York. Salesmen: A. T. Carnahan, Guy Moore, and J. B. McCabe, New York; M. J. O'Connor, Akron.

Thermoid Rubber Co. (Trenton, New Jersey).

Pneumatic tires, including inner tubes, were shown by the Thermoid Rubber Co. In addition, this company exhibited its brake lining, which is now entering into general use. It is claimed for the Thermoid brake lining that it will not burn and is practically wear proof. It affords a quick and positive grip, which is most essential, in automobile use, where emergencies requiring a quick stop are frequent.

REPRESENTATIVES.—J. O. Stokes, president; F. S. Wilson, sales manager; J. H. Kirk, New York; S. G. Lambert, Boston; W. B. Ruston, Philadelphia; John Pohlman, Cincinnati.

Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey).

This company is one of the very few not making complete tires. It exhibited a complete line of tire materials and an innovation in the shape of the "Ideal Twin" sleeve. The "Ideal Twin" sleeve is designed permanently as well as temporarily to provide against blow-outs or rim cuts in automobile casings. It consists of an inner sleeve and an outer jacket, the latter with a wearing tread surface.

REPRESENTATIVES.—John J. Voorhees, president; Charles Dickey, factory superintendent; John Caldwell, branch manager; John Caldwell, Jr., assistant branch manager, Boston.

ONE OF THE MOST GRATIFYING FEATURES of the automobile industry is the remarkable development of the export business during the past three years. In 1908 it amounted to only \$4,464,423, while last year it rose to \$12,144,341, a gain of \$7,459,918.

ONE OF THE LARGEST RUBBER TIRE MANUFACTURERS in the United States announces that the company has been engaged to supply 64 automobile manufacturers with tires during 1911.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED DECEMBER 6, 1910.

- N**O. 977,472. Hose coupling. H. M. Pilkington, Ridgewood, N. J.
 977,492. Tire. [Pneumatic; with armor plates.] J. A. Vitello, Abbeville, La.
 977,849. Combined air rifle, rubber ball, and pop gun. E. S. Roe, assignor to Markham Air Rifle Co.—both of Plymouth, Mich.
 977,884. Tire. [Cushion.] J. M. Benham and G. W. Slater, Oakland, Cal.
 977,885. Vehicle tire. [Pneumatic.] P. B. Bosworth, Akron, Ohio, assignor to Firestone Tire and Rubber Co.
 977,886. Fastening means for vehicle tires. *Same*.
 977,887. Detachable fastening for pneumatic tires. *Same*.
 977,888. Fastening device for vehicle tires. *Same*.
 977,889. Fastening device for vehicle tires. *Same*.
 977,890. Vehicle wheel rim. *Same*.
 977,628. Tire. [Solid; with special form of rim.] H. H. Hodgson, Toronto, Canada. [The Endurance Tire Co. has been incorporated at Detroit, Michigan, to market this tire.]
 977,762. Eraser tip for pencils. A. Tregoning, Los Angeles, Cal.
 977,843. Rim for tires of motor vehicle wheels. C. B. Siner, Philadelphia.
 977,844. Rim for tires of motor vehicle wheels. *Same*.
 977,972. Vulcanizer. [Electric heating; for tire repairs.] C. A. Shaler, Waupun, Wis.
 978,919. Tire for vehicle wheels. [Solid.] N. Guthrie and C. L. Johnson, Dallas, Texas.
 978,029. Threadless hose coupling. H. Kell, assignor of one-half each to J. F. Johnson and C. W. Piper—all of Worden, Ill.

Trade Mark.

- 52,439. Gorham Rubber Co., San Francisco. The word *Grizzly*. For rubber mechanical goods and tires.

ISSUED DECEMBER 13, 1910.

- 978,210. Tire tread attachment. [Side chains.] O. A. Rixford, East Highgate, Vt.
 978,243. Tire armor. A. F. Walker and J. Gilles, London, England.
 978,274. Puncture proof guard for pneumatic tires. G. S. Crawford, assignor of one-half to R. R. Reed—both of McKeesport, Pa.
 978,304. Rubber attachment. [Relates to overshoes.] H. Karnatz, Menomonie, Wis.
 978,541. Woven elastic fabric. E. Baumgarten, Barmen, Germany.
 978,549. Tire. [Relates to a recessed tread.] J. A. Bowden, Los Angeles, Cal.
 978,583. Apparatus for use in reclaiming vulcanized rubber waste. C. S. Heller, Barberton, assignor to the Moore Architectural and Engineering Co., Akron, Ohio.
 978,584. Process for reclaiming vulcanized rubber waste. *Same*.
 978,619. Hose coupling. B. Morgan, Newport, R. I.
 978,689. Resilient block. N. J. Busby, Boston.
 978,696. Process for separating rubber or rubber like substances and resin from materials containing the same. L. H. Chanut, Aubervilliers, France, assignor to Asia Rubber Co. of America, a corporation of Maine.
 978,731. Metallic fabric suitable for pneumatic tires of motor cars and other carriages. [A strengthening sheet to be interposed between the inner and outer strips of tire casings.] C. M. Gautier, London, England.
 978,766. Tire retainer. C. Markel, Clinton, Iowa.

Trade Mark.

- 49,970. The Goulds Mfg. Co., Seneca Falls, N. Y. The word *Mistry*. For hose nozzles.

ISSUED DECEMBER 20, 1910.

- 978,976. Demountable wheel rim holder. L. Wolff, Jr., Chicago.
 979,008. Tire tread for motor vehicles. M. A. Kennedy, Toronto, Canada.
 979,139. Anti skid device or chain. R. N. Evans, assignor to Atlas Chain Co.—all of New York.
 979,140. Anti skid device for tires. R. N. Evans and P. T. Hamm, assignors to Atlas Chain Co.—all of New York.
 979,141. Anti skid chain. R. N. Evans, assignor to Atlas Chain Co.—all of New York.
 979,159. Anti skid device for tires. P. T. Hamm, assignor to Atlas Chain Co.—all of New York.
 979,160. Anti skid device for tires. *Same*.
 979,188. Spare tire holder and trunk support. L. P. McKinney, assignor of one-half to J. L. Snow—both of Boston.
 979,241. Heel. [Embraces an elastic cushion layer.] F. L. Alley, San Francisco, assignor to United Shoe Machinery Co., Paterson, N. J.
 979,279. Vehicle tire tool. C. H. Frazier, South Bend, Ind.
 979,316. Eraser for typewriter machines. D. M. Lemon, assignor of one-half to E. V. Page—both of Boston.
 979,325. Tire. H. E. Moebus, Boston, assignor to H. W. Brown, Brookline, Mass.
 979,361. Means for fastening rubber heels. I. Vulpescu, Detroit, Mich.
 979,365. Horseshoe. R. Barclay, Youngstown, Ohio.

Trade Marks.

- 28,111. The B. F. Goodrich Co., Akron, Ohio. The representation of an anchor. For rubber hose.

- 51,748. Wallace, Scott & Co., Ltd., Glasgow, Scotland. The word *Dexter*. For rainproof coats.
 51,977. The Diamond Rubber Co., Akron, Ohio. The number "8338." For insulated wires and cables.

ISSUED DECEMBER 27, 1910.

- 979,408. Hose construction. C. M. C. Baird, Evanston, Ill.
 979,417. Elastic tire for vehicles. A. Boerner, Bricssnitz, near Dresden, Germany.
 979,468. Automobile wheel. [A demountable tire carrying rim.] J. M. Gilbert, Mount Vernon, N. Y.
 979,481. Hose coupling. E. J. Hannold, Mexico, Mo., assignor to C. M. Clay.
 979,568. Tire shoe wrapping and vulcanizing apparatus. R. Rowley, New York city.
 979,699. Puncture guard for pneumatic tires. T. H. Prince, Detroit, Mich.
 979,869. Cushion tire wheel. C. A. Marien, St. Louis, Mo.
 979,870. Cushion tire wheel. *Same*.
 979,882. Tire. [Solid rubber.] J. J. Patton, New York city.
 979,883. Tire. *Same*.
 979,889. Tire shoe vulcanizing apparatus. R. Rowley, New York city.
 979,902. Recovery of rubber. [Relates to the preparation of crude rubber.] H. T. G. Van der Linde, New York city.
 979,961. Non skid tire. R. H. Keaton, San Francisco.
 980,138. Pneumatic cushion for vehicles. G. J. Bancroft, Denver, Colo.
 980,173. Rubber footwear. M. C. Clark, assignor to Maurice C. Clark Co., Providence, R. I.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA-RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1909.

*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 7, 1910.]
 18,643 (1909). Detachable tire rim. H. Foden, Manchester.
 18,644 (1909). Means for securing a spare tire carrying rim to a wheel. H. Foden, Manchester.
 18,711 (1909). Detachable tire carrying rim. T. Dunn, London.
 18,765 (1909). India-rubber bulbs for automobile horns. H. Lucas and B. Steeley, Birmingham.
 18,875 (1909). Device for facilitating the mounting of tire covers on wheel rims. J. McStay, Belfast.
 18,988 (1909). Protective non skid cover for tires. G. Duncan, Wormit-on-Tay, Fifeshire.
 18,992 (1909). Elastic tip for chair legs. W. C. Mackay, Hillhead, Glasgow.
 18,999 (1909). Pneumatic tire tube. J. Jelley, Coventry, Warwickshire.
 19,016 (1909). India-rubber substitutes. A. Smith, Brockley, Kent.
 19,094 (1909). Leather or india-rubber tread bands for pneumatic tires. A. Ascheri, Puteaux, France.
 19,103 (1909). Elastic tire consisting of smooth abutting sections of rubber inclosed in a cover. W. P. Mulic, Leiden, Netherlands.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 14, 1910.]
 19,142 (1909). Carrier for spare wheels and rims. F. Keegan and Dunlop Pneumatic Tyre Co., Ltd., Coventry.
 19,170 (1909). Means for repairing tires. H. and H. Tankard, London.
 19,194 (1909). Spring wheel with rubber tread. J. Johnston, London.
 19,218 (1909). Spring wheel with rubber tread. F. Bonmüter, Breslau, Germany.
 19,220 (1909). Heel protector. S. A. Wieland, London.
 19,237 (1909). Heel protector. F. Iddon, Leyland, Lancashire.
 19,283 (1909). Molding india-rubber. T. Gare, New Brighton, Cheshire.
 19,361 (1909). Anti skidding pneumatic tire. A. J. Wilson, London.
 19,400 (1909). Tread band and method of securing same. W. T. G. Ellis, Langside, Renfrewshire.
 *19,412 (1909). Fabrics for pneumatic tires. C. Zeglén, Chicago, Illinois.
 19,468 (1909). Wheel with elastic cushion between the hub and the rim. L. Sterne, London.
 19,591 (1909). Method of attaching elastic tire to rim. R. S. Currie, London.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 21, 1910.]
 19,716 (1909). Tire for replacing temporarily a pneumatic. J. M. Strachan, London.
 19,792 (1909). Pneumatic tire comprising an inflatable tube, a cork layer and a rubber or like covering. D. M. Beaton, Crookston, Paisley.
 19,832 (1909). Pneumatic tire for use on land and water. A. W. Long, Bradford-on-Avon, Wiltshire.
 *19,841 (1909). Sound deadening supports for typewriters. C. M. Turton, Los Angeles, California.
 *19,913 (1909). Plate for artificial teeth. G. S. Whittaker, New York.
 *19,926 (1909). Dressing fabric to render it suitable for fire hose. P. L. Wooster, Yonkers, New York.

- *19,947 (1909). Tread plate and method of securing same on the tire. E. Russell, Kansas City, Kansas.
- 19,964 (1909). Elastic tire and method of securing same to rim. A. W. Torkington, London.
- 20,039 (1909). Non skid studs adapted for rubber tread bands of pneumatic tires. G. Webb, Monmouth.
- 20,122 (1909). Elastic tire. V. Peradotto and C. Demonte, Turin, Italy.
- 20,146 (1909). Pneumatic tire with air chamber consisting of connected segments. F. G. McKim, London.
- 20,205 (1909). Device for automatically inflating tires. E. Petrini, Upsala, Sweden.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 30, 1910.]
- 20,221 (1909). Bottle stopper with a rubber ring. D. Hurst and H. K. Bridger, London.
- 20,252 (1909). Tire inflating pump. A. Reece, Birmingham.
- 20,316 (1909). Bottle stopper with a rubber washer. Cambridge Scientific Instrument Co., Cambridge.
- 20,341 (1909). Spring wheel with an elastic tire. F. F. Ganly, Manchester.
- 20,382 (1909). Elastic tire and means for securing same. T. Gilbert-Russell, Slough, Buckingham.
- 20,388 (1909). Elastic tire consisting of a sectional steel bed, a rounded solid rubber body shaped to fit the bed, and transverse studded leather tread strips. R. Peretti, Rome.
- *20,396 (1909). Spring wheel with pneumatic cushions. A. C. Gillam, Hicksville, Ohio.
- 20,403 (1909). Elastic tire with non slipping studs. O. Schaffner, Halle-on-Saale, Germany.
- 20,424 (1909). Lever for facilitating the manipulation of the security bolts and valves of pneumatic tires. W. Lemon, Bristol.
- 20,453 (1909). Means for securing detachable wheels. R. W. Maudslay and Standard Motor Co., Coventry.
- 20,508 (1909). Insoles. H. Mortimer and two others, Northampton.
- 20,517 (1909). Golf ball. P. A. Martin, Birmingham, and J. Stanley, Sparkhill.
- 20,722 (1909). Spring wheel in which the elastic band by which the inner wheel is suspended from the outer rigid hollow chamber is shaped and secured so that a compressible air chamber is formed. J. Spyker, Wesperzyde, Amsterdam.
- 20,728 (1909). The silk finish of a fabric preserved by treating it with a solution containing caoutchouc or gutta-percha. F. A. Bernhardt, Zittau, Germany.
- 20,806 (1909). Rubber presses. R. Bridge, Castleton, Manchester.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 31, 1910.]
- 20,879 (1909). Detachable tire carrying rim. W. T. Smith, Bolton, Lancashire.
- 20,883 (1909). Slipping preventing attachment for vehicle wheels. W. H. Ellam and H. McMillan, Anerley, Surrey.
- 20,927 (1909). Non slipping device for elastic tires. T. Sloper, Devizes, Wiltshire.
- 20,951 (1909). Spray producing nozzle. G. Olney, Hobart, Tasmania.
- 21,111 (1909). Non slipping device for pneumatic tires. A. Horch et Cie. Motorwagenwerke A.-G. and F. Weller, Zwickau, Germany.
- 21,221 (1909). Pneumatic tire. J. Spyker, Wesperzyde, Amsterdam.
- 21,246 (1909). Composing and distributing type apparatus with rubber covered rolls. W. Chipperfield, Romford, Essex.
- 21,250 (1909). Pneumatic tire with segmental tread. W. C. Ellis, Bowdon, Cheshire.
- *21,278 (1909). Elastic tire built of alternate sections of rubber and a fabric such as cotton duck, molded and vulcanized together. L. M. Nelson, Douglas, Wyoming.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

- 416,644 (April 22, 1910.). Algemeene Uitrinding Exploitatie Maatschappij. Process of manufacturing, with the aid of animal matter, an elastic material similar to caoutchouc.
- 416,665 (June 1). Empire Cream Separator Co. Process and apparatus for the manufacture of caoutchouc or similar substance.
- 416,743 (June 2). P. Grill. Armored covering for wheel tires.
- 416,817 (June 6). L. Petz. Demountable anti skidding protector for pneumatic tires.
- 416,851 (June 7). G. Fossi. New type of pneumatic tires.
- 416,873 (April 11). Butrulle and Masquelier. Pneumatic suspension for baby carriages and other small vehicles.
- 416,998 (May 31). E. Janck. Elastic tire for vehicle wheels.
- 417,102 (June 13). P. Roussillon. Process of manufacturing cabled tires.
- 417,154 (June 15). C. F. C. Morris. Improvements applied to the tires of vehicle wheels.
- 417,170 (June 15). Badische Anilin and Soda Fabric. Production of substance having the properties of caoutchouc.
- 417,186 (August 23, 1909). A. Wolber. Process and apparatus for coating fabrics and textile materials with caoutchouc or any other plastic product.
- 417,199 (June 16, 1910). M. Siramy. Pneumatic tire cover.
- 417,312 (June 21). Doherty & Robbins. Improvements on coverings for pneumatic tires.
- 417,368 (June 22). W. B. Hartbridge. Improvements applied to elastic tires for the wheels of road vehicles.
- 417,396 (June 23). W. E. Carmont. Anti skidding device for tires and tire envelopes of rubber.
- 417,418 (June 23). Societe des Automobile "Unic." System of tires strengthened by means of checks, triplicated, and so on.
- 417,470 (June 25). T. Cann. Improvements relative to the repair and reinforcement of pneumatic tires.

ARTIFICIAL RUBBER IN THE COURTS.

ONE Albert R. Ellison, of Boston, has been sued by Joseph S. Stearns, of Waltham, Massachusetts, in the sum of \$50,000. The plaintiff alleges a contract between the two, back in 1905, for the manufacture of artificial rubber by a secret process. The terms of the contract, Stearns alleges, were that he was to put up the money, and after it was paid back, they were to share the profits jointly. He now claims that he never got any money back, and that he learns that Ellison has disposed of the secret to the North American Rubber Co. for a substantial amount.

There have been a good many North American Rubber companies, but the only one which has claimed to be alive of late is that incorporated in Maine, in the summer of 1909, capitalized at \$5,000,000, and based upon "a process for the manufacture and production of crude rubber by means of chemicals." They claimed from the outset to have orders for all that they could produce at \$1 a pound. [See I. R. W., October 1, 1909, page 25.] The promoters in a circular of February 24, 1910, stated "the company is already amply financed"; "a large factory is now being fitted up and has already begun to deliver goods"; and a single order was mentioned which would yield "about \$20,000 daily profit" indefinitely.

The promoters of this same North American Rubber Co., in a circular of May 23, 1910, stated many "facts in brief": Factory at Hyde Park "already making \$200 daily profit"; "profits next week about \$400 a day"; "eight thousand shares have been sold in London at \$7.50 per share, but for a few days stock can be had here at \$5 a share." A circular of Wheeler & Shaw, Inc., of Boston, issued in October, 1909, described the capital stock as "divided into 50,000 shares of a par value of \$100, fully paid and non-assessable." C. O. Norcross, signer of the circulars before mentioned, wrote to members of the trade August 2, 1910: "Quite a little of the stock has been sold at \$7.50 per share, and some at the par value of \$10, but I took an option on quite a block at \$5, which has not yet expired, and can furnish you with it at that price." He claimed also that the Hyde Park factory was "already making three or four tons a week at a profit of about \$1,200 a ton," and "a new factory of 20 tons daily capacity has already been bought."

While the trade awaited an opportunity to see the new product THE INDIA RUBBER WORLD was presented with a doormat said to be made of "artificial rubber," but without any supporting affidavit. A stranger visiting the office of this paper proceeded to talk at length on the merits of the new rubber; he was a subscriber and thought that the paper ought to know the facts.

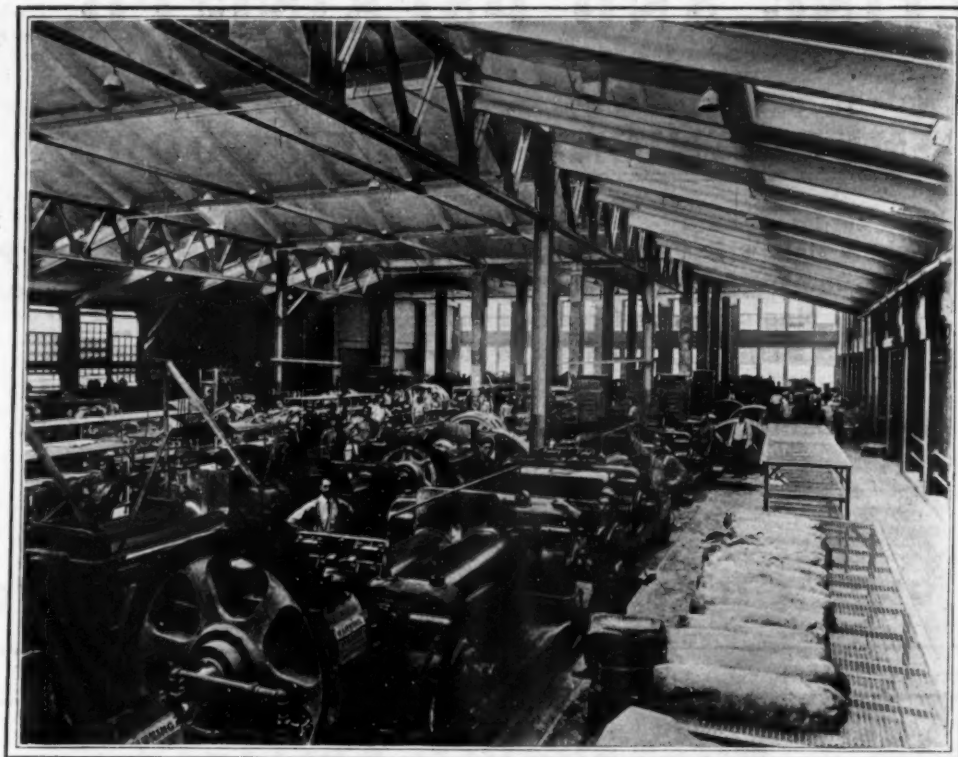
"What is it—refined Pontianak gum?" he was asked.

"I don't really know what is in it," he said; "my only interest in the matter is that I am a shareholder in the company." And he withdrew.

The Boston Commercial of January 7, 1911, reported: "North American Rubber shares, which were floated at \$5, have recently sold at \$1 a share," indicating that doormats were being made of the shares. Just before, the newspapers had mentioned arrangements had been consummated "whereby Wheeler & Shaw, Inc., who have financed and controlled the North American Rubber Co. from the beginning, will retire." The New York Journal of Commerce about that time heard that "with the completion of present arrangements approximately 400,000 shares [\$10 at par] will be outstanding."

Meanwhile no one has been heard to attribute the recent decline in crude rubber prices to any great output by the North American Rubber Co.

THE India-Rubber Journal says: "A large proportion of the rubber footwear sold in this country [Great Britain] is still made abroad, and there is little sign of any such movement as has taken place of late years in the leather boot and shoe trade."



THE MILL ROOM

Here the rubber is rolled or milled to give it proper consistency. This is the next step after the cleaning and drying of the crude. In other words this picture shows the manufacture of rubber. Further on, the rubber is patterned into articles of sale, and cured.

This department, representative of the equipment of the plant of the B. F. Goodrich Company, is the largest and most completely equipped Mill Room in the world.

NEW YORK BELTING AND PACKING CO., Ltd.

MANUFACTURERS OF A COMPLETE LINE OF HIGH GRADE
MECHANICAL RUBBER GOODS

Including Cobb's Piston & Valve Rod Packing, Indestructible White Sheet Packing
Vulcan High Pressure Spiral Packing, "1846" Para Rubber Belting,
Magic Garden Hose, Air Brake, Air Drill, Steam,
Suction, Water Hose, etc.

Original Manufacturers of Interlocking Rubber Tiling.

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THOROUGHLY RELIABLE.

The policy of furnishing only the finest goods that can be produced with perfect materials, latest and best machinery, and highly skilled workmen of long experience, has been, is now, and will continue to be, the policy of

The Mechanical Rubber Company,

CHICAGO, ILL.

Branch Store, No. 1810 Blake Street, Denver, Colo., where we carry a full line of goods.

Manufacturers of all kinds of rubber goods for mechanical uses—Hose, Belting, Packing, Gaskets, Bicycle Tires, Specialties, Moulded Goods, Etc., Etc.

If you are unable to satisfy your trade with goods you are supplying,
If you are in search of good goods at fair prices,
If you cannot get quick deliveries,
If you are not getting fair value for your money,
IN ANY EVENT,

} SEND TO US FOR SAMPLES AND
QUOTATIONS.
WE CAN SUIT YOU EVERY WAY.

FACTORY, GRAND AVE. & ROCKWELL STS

THE MECHANICAL RUBBER CO., 230 Randolph St., Chicago, Ill.

The Rubber Club of America Banquet.

THE success of the twelfth annual banquet of The Rubber Club of America, which was given in New York, at Delmonico's, on the evening of January 11, more than justified the expectations of the committee on arrangements and of the membership in general. It was the first dinner of the Club to be held outside of New England, which reason encouraged the attendance of rubber men resident in New York and its suburbs, and farther West.

The Club, founded, according to the articles of incorporation, for social intercourse and for the furtherance of educational and scientific research in india-rubber production and manufacture, was originated as the New England Rubber Club, and now includes the chief members of the importing firms of New York and Boston, rubber shoe manufacturers, and the tire manufacturers of the West, and the industry in general.

The members of the Club and their guests gathered at an early hour in the anteroom to the ballroom, in which the banquet was to be served, where they had an opportunity to greet each other and renew acquaintances. The social feature of the occasion was enhanced by the seating of the diners around small tables. The speakers were seated on either side of the president, at a long table at the west side of the room.

The decorations of the banquet room were particularly effective, consisting of the flags of various countries, red and white carnations, and tiny red electric bulbs, which shone brightly through the foliage which banked the front of the speakers' table, draped with red hangings. Red carnations and tiny red bulbs completed the decorations of this table, back of which were artistically draped the American, British and Brazilian flags. Intertwined along the sides of the room were American and British flags and the colors of the various rubber countries, a most effective complement of the whole being a gracefully draped American flag covering the entire front of the balcony which contained the musicians.

Each individual table contained eight beautiful white pinks and eight small silk flags, mounted on standards, representing the rubber producing countries, and which added very much to the attractiveness of the scene. A photographic view of the room appears as a frontispiece in this issue.

After an invocation by the Rev. Sidney Ussher, D.D., assistant rector of St. Bartholomew's church, the president of the Club (Mr. Henry C. Pearson) said:

GENTLEMEN OF THE RUBBER CLUB OF AMERICA, AND GUESTS: Republicans, Democrats, Prohibitionists, Suffragists—whatever your previous condition of political servitude, whatever your present political faith—I ask you to join me in drinking to the health of the President of the United States. [Applause.]

I shall have to ask you to be just as quiet as possible, in order that I may make myself heard. The particular reason lies with me, this time, that I have had about two weeks of tonsillitis, and I would not have talked to any other Club on the face of the earth than this, my own Club, tonight. [Applause.]

I am delighted to do it. I am proud of the way in which we have broken in upon New York. As far as I can see, the dinner has been a complete success, and you all have had a good time.

There are two or three things, besides my shred of a voice, that ought to be apologized for, perhaps. There was a mistake in the seating, but, after all, what is the use of apologizing. We are all having a good time; we are all here, and it is where we want to be.

I have a very courteous letter from Colonel Colt, who regrets that he cannot be with us. He says that another year he surely will be here. I am sorry, too. I won't read the letter, but it is in his particular courteous vein, that we all know and admire. [Applause, and songs of "He's a Jolly Good Fellow" and "So Say We All of Us."]

Now, as we have learned that the Kellys are not invisible, it won't be necessary to sing "Has Anybody Here Seen Kelly?" That, however, is one of our features [referring to a regular item of the Club dinner programme] that I hope we will always keep up; because it is a touch of human nature that all love. [Applause.]

You all know of the very important suits that are now being carried on in Washington. We expected that the Hon. William M. Ivins would be here this evening, and that he would give us, in a few words, the result of a decision, *pro* or *con*, upon the rubber trade. Mr. Ivins was very anxious to do that, but he is held in Washington until Thursday, and sends his regrets.

That does not mean, however, that we are left without a very brilliant array of speakers. Before I introduce the first, I want to say, I went from London through the Mediterranean, through the Suez canal, the Indian ocean; down through the Straits of Malacca, up through the China sea, and clear to Hongkong before I saw the Stars and Stripes, and then it was not on a merchant vessel; it was on one of the old "Monitors" that had been towed across the Pacific and left there; because they couldn't take it anywhere else, and didn't dare do so.

Last winter when I went down through the Southern oceans and up the Amazon and back, I saw the United States flag once, and then not on a merchant vessel. What I am leading up to is that we have as our guest this evening the Hon. Lewis Nixon,* who knows more about shipping, the world's shipping, than probably anybody else, and who, for twenty-seven years, has been studying it in its relation to American commerce. [Hear! Hear!] He is to talk to us, and we are very fortunate. [Applause.]

THE AMERICAN MERCHANT MARINE.

THE Hon. Lewis Nixon, the first speaker, delivered an elaborate address upon a subject to which he has devoted lifelong study, and which was listened to with great interest. Mr. Nixon held that no one question bearing upon the industrial life of the United States today is more important to every American citizen than that of bringing back the American flag upon the seas—in other words, the rehabilitation of our merchant marine.

The great overmastering power upon the oceans of the world is England, the present proud condition of whose merchant fleet rests upon about 160 years of national endeavor. The result of wars waged directly for commercial aggrandizement was to give England the mastery of the seas, with power to fix the tolls for the carrying of freight throughout the world—the master voice in every international dispute, the arbitration of exchanges and values the world over.

Back in the days of wooden ships England was dependent for the most part upon imported wood to put into her ships, but she frowned upon the purchase of any foreign ships at all, and the only ships that flew the flag of her navy were either built in English shipyards or captured from the enemy in wars. From the beginning of the British empire it was realized that the extent of that empire was to be measured by the capacity to build and sail ships, for in order to assert your rights upon the sea you must sail it with your own ships and under your own flag.

In time iron supplanted wood in shipbuilding, which changed England from a non-producer of material for ships to a position of masterly advantage in that particular art. Then came our civil war. Before that time the American merchant fleet sailed every sea, but during the four years of the war it disappeared, England having a good deal to do with bringing about this result.

After the war the people of the United States turned their attention to internal development, while England turned herself to the development of ocean commerce. The revenues of such an empire are largely in proportion to the area covered; England's area was the world, and she waxed strong. But

*Mr. Nixon, after being graduated from the United States Naval Academy, was sent by the navy department to the Royal Naval College at Greenwich, England. He designed several battleships, including the Oregon, after which he left the navy and became attached to the Cramp shipyard, in Philadelphia. Still later he has been engaged in shipbuilding on his own account, including the construction of a number of vessels for the government. He represented the United States as a delegate to the Pan American Conference at Buenos Aires and as special ambassador at the recent centennary of Chile.

about 1890 appeared upon the horizon two challengers to her anticipated sway, the United States and Germany.

The United States confined her interest in this field to the building of a navy. Such navy as we had before that time was the joke of other nations, and public sentiment was slow in supporting any proposal toward modernizing it, but the work continued until there is a new navy of which every American is proud.

When we first started this new navy we couldn't make the forging for a crank shaft or a gun; we couldn't make the cast steel for the machinery; we couldn't make the metal plates of which her hull was built; we couldn't make the manganese bronze and other combination castings which were required under the drastic conditions at that time. But today the metal arts of the United States lead the world—due to the salutary effects of the navy.

The speaker told how the United States once had a flourishing merchant marine. When the thirteen British colonies in America achieved their independence it was soon found to be impracticable, on account of the various methods that they had to regulate commerce between this and the rest of the world. The controlling cause of the union of our States, and of our present government, was the absolute necessity of some central power to regulate commerce with foreign nations. This being the case, we had the men who had achieved our independence, and the great leaders in public thought at that time, to bring about and mold a constitution. The very first act of these men, when they were called together in the first Congress, was to pass laws for the regulation of commerce, and when we speak of regulating commerce we mean to so regulate it that it shall not disappear from the seas.

At that time we had no merchant marine in the foreign trade. We were repeatedly going into debt to Great Britain and to other nations of Europe. We were helpless upon the seas. So the first Congress passed laws levying discriminating duties upon imports carried in foreign bottoms, and discriminating tonnage dues, and providing that only home built ships should fly the American flag. In less than five years, under this initial legislation, our ocean shipping had increased 385 per cent., and by 1826 American ships were carrying 93 per cent. of our commerce upon the ocean. In time, however, the operation of some of the American laws already mentioned was suspended, with the result of discouraging the American shipping trade and aiding the foreigner.

Let us see what it means to the United States to have our

own commerce carried in our own ships. One trouble with our statistics of foreign trade is that they give only a statement of the imports and of the exports. But there is somewhere a steady drain upon our resources which does not appear in the national trial balance—a drain of the earnings of the foreign ships which carry our ocean trade. It amounts to about \$300,000,000 a year, and during the last 25 years it has amounted to more than \$6,000,000,000 in gold of the United States paid to foreign ship-owners.

Our statesmen, at the birth of this nation, considered that its greatness would depend upon three pillars—commerce, agriculture and manufactures. We have neglected one of these, in consequence of which the national structure is becoming lopsided. It will not be trued up, and we shall have alternate periods of depression and prosperity, until we reclaim this great trade factor of the commercial earnings of our fleet.

Every ship that carries a cargo abroad, that you pay for carrying it, reduces your credit abroad. If you pay freight to foreigners on the imports that you bring in here, you increase your duty here; and so, no matter how you put it, or how you place it, every cent paid to foreign ships, and which might be paid to American ships, is a draft upon the resources of this country, and is shown in the exchanges of the world over, and that is the theory propounded by all those who took this great control of this factor of prosperity of the United States.

We hear a great deal nowadays about the revision of the tariff. Before the war we had two strings to our bow—the tariff tax and the earnings of our merchant ships. Today we have only one, and if we absolutely throw down all the barriers of the other string to our bow—the tariff—what a fine condition we should be in. The only way in which we can bring about that tariff revision which is necessary and essential in our industrial life, that we may send our products abroad, and cease to be merely producers and consumers, is to say to the rest of the world: "You can no longer do our carrying, and insure our goods, and do all the middleman's work and take all the middleman's profit, because the Americans propose henceforth to do that for themselves."

As to means that have been suggested for re-establishing American shipping, the speaker referred to free ships. The purchase of enough ships abroad to carry our share of international commerce, he said, would cost hundreds of millions of dollars, to be drawn from the resources of the country. And then, with these ships owned here, there would remain conditions, described by the speaker, which would handicap America in the competi-



HON. JAMES GUSTAVUS WHITELEY.
[In the uniform of Consul General of the Congo Free State.]



HENRY C. PEARSON.



H. E. RAYMOND.

tion. The English freight rates today, he said, average the highest in the world, and yet they do most of the business; they have control of the insurance, they have control of the inspection, and so on.

He would have conditions changed to the end that American shipbuilding be encouraged. To the objection that ships cannot be built as cheaply here as abroad, he pointed out that upon the great lakes of the United States are to be seen ships, of home make, that in character, in efficiency, adaptability to service, in economy of operation, and in price, cannot be matched upon the face of the earth. They have a demand for a particular kind of ships which fills various yards, and enables them to specialize. The builders of the great British liners have their yards filled with a particular line of product, working every day and always turning out the same kind of thing, and when England turns into the waters of the world 1,800,000 tons of shipping a year, it will be seen what advantage she has when we attempt to compete with her in the retail way, while she goes wholesale at the job.

They say that the foreigner can run ships more cheaply than Americans. Time was when we ran ships in fair competition with the whole world, before the great combines on the ocean had been brought about, and at a profit.

And if we can today carry a ton of merchandise per mile upon our railroads at a fraction of the cost that any other part of the world can, and pay our men four or five times as much, can you say that the American, under his own flag, with a great national plant to do it in the wholesale way, cannot uphold the freight connections with the rest of the steamship lines of the world—that we can't do the same thing that we did in the past, when we had a national government which stood for Americanism?

Mr. Nixon does not favor a subsidy for shipping. First, because he does not regard it constitutional; second, because the government could never vote enough money out of the treasury to establish a new merchant marine. Somebody else would always be ready to put up more and take away the business. He considers a postal subsidy proper, however, under the constitutional grant to Congress of the power to establish post offices and post roads. While this would not, alone, keep at home the earning of the hundreds of millions now sent abroad for freights, it would be an entering wedge. The great foreign ships which carry ocean mails to and from the United States, Mr. Nixon spoke of as having been built "out of the profits of the trade which we furnish, and which we are perfectly satisfied to turn over to the rest of the world."

Speaking of shipping facilities between the United States and South America Mr. Nixon said:

You gentlemen in this room who are interested in rubber will find that the ship of your own country is the better ship to pass along and push your trade than the ship of some other country. The foreigner is going to sell his own goods first every time. He is insured at home; all his various connections are made at home, and his whole idea of how to be prosperous is to have the country back of him prosperous. I glory in that particular faculty of the foreigner; he seems to have some idea that charity should begin at home and not abroad, while the altruistic Americans seem to think that they must help the rest of the world before they help themselves.

The keynote of the speaker's remarks was that to be a great nation it is necessary to be a self-contained nation. If we are going to carry our flag upon the sea in merchant ships we need a great cargo carrying marine to co-operate with the mail steamers, and this can come only through some general policy of governmental encouragement. The nations of the earth have been on the alert always to take advantage of treaties into which we have entered, and the speaker pointed out instances where the government at Washington had freely given to foreigners advantages which it was not bound to do, instead of reading the constitution to mean that the power of Congress to regulate trade means to bring about a preference for the American ships—to try to drive trade into the American's hands. The rebuilding of the merchant marine is to be brought about through the exercise of this constitutional right—by the sweeping aside of privileges which have been given to foreigners at the expense of our own people—by abrogating or terminating commercial treaties, if need be, and insisting upon new terms. Every one of the existing conventions has a clause providing that it can be suspended upon the giving of notice, and shall we not have the courage of Americans to assert ourselves when, in the course of time, a bargain made in the shape of a convention is found to be inequitable?

THE RUBBER COUNTRY OF THE CONGO.

The President said:

I very much wish that I had time to comment upon the scholarly and patriotic and comprehensive address that we have just listened to. But, after all, you don't want to hear me talk; you want to hear the rest of the speakers; and, therefore, I will draw your attention to the other side of the earth—to the Congo.

We have, as a guest this evening, the Hon. James Gustavus Whiteley, the representative of the Belgian government in its great Congo holdings. Mr. Whiteley has consented to say something about the future development of the Congo. Mr. Whiteley.



PROF. HENRY H. RUSBY.



HON. LEWIS NIXON.



CRESWELL MACLAUGHLIN.

Mr. Whiteley responded as follows:

MR. PRESIDENT AND GENTLEMEN OF THE RUBBER CLUB OF AMERICA: Your President said this evening that he had a great many things to apologize for, which he would not specify. Permit me to say that I am "It." When your President kindly invited me to dine with you tonight I gladly accepted, because, as King Solomon says, in Ecclesiastes—with which you are all familiar as Bible students—"Who can eat or who can hasten thereunto more than I?"

I didn't quite understand what a rubber dinner was. I thought, perhaps, it might include theatrical properties, such as rubber stocks and elastic sausages, and, possibly, in the fish course, rubber "soles" and rubber "eels." But I found that I was mistaken. And when your President further invited me to say a few words—and he was so fearless of your interests that he forgot to accent the word "few"—I gladly accepted that invitation, too, not because that I had anything special to present to your consideration, but I was glad of the opportunity to salute the *elite* of the rubber trade at your annual dinner, and to wish you success and prosperity for the New Year.

The rubber business seems to me the greatest in the world. There is nothing like rubber. It used to be thought that it was "love" that made the world go round; but it seems to me now that it is "rubber." All the world goes round on rubber—rubber soles, rubber heels, and rubber automobile tires; and those who do not go round on rubber automobile tires are soon run down and have to go around on crutches fitted with rubber tips. So we can't avoid it. [Laughter.]

I have been connected with the rubber business for a number of years—on the producing side, not on the manufacturing side. For five or six years I was the Consul General of his late Majesty, King Leopold, representing the interests of the Congo Free State in America. And when the Congo State was officially annexed to Belgium, as a Colony, it ceased to exist as a sovereign independent State, and its Consul General officially died with it.

You remember—but I hope you do not—the old clergyman, who, in reading the Scriptures to his congregation, came to the words "We shall not all die, but shall all be changed," but the Bible was well thumbed and the "c" in the word "changed" had become completely obliterated, so that the good old parson read the words just as he thought he saw them, and announced to his congregation, "We shall not all die, but shall all be hanged."

Well, gentlemen, when the Congo Independent State died I did not die in the flesh, nor was I hanged; I was changed. I ceased to have an official position, but I still have the honor of representing the Belgian government on the boards of various *concessionaire* companies which are largely interested in the production of rubber in Africa.

Thirty years ago the Congo produced no rubber—that is to say, commercially. It was there in the trees, but none was exported or used. In fact they produced very little except cannibals and a lot of unfortunate natives who were rounded up by the Arab traders and sold into slavery. But now all that has been changed. The Congo State at the present time produces about 10,000,000 pounds of rubber a year, besides other tropical products, such as cacao, ivory, and palm oil, which, altogether, yield some \$15,000,000 of exports. And in the near future we hope to increase that material, and all this has been brought about principally through the genius, foresight, and initiative of one great man—his late Majesty, King Leopold II.

The Arab slave traders have been put out of business. A civilized government has been established, so that the merchant and the missionary may dwell in peace and safety, instead of furnishing a festal meal for the natives. Now cannibalism only really exists in the outlands of the State and the less accessible regions.

But the work which was commenced under King Leopold is not all. This is just the beginning. That was sort of rough work—just the cleaning off of the ground. The King has passed away, and his nephew, King Albert, now reigns in his stead; and there is no one more capable, or more fitted, to carry out the great work than King Albert. He is a young man of about 35 years, remarkably patriotic, devoted to his country and to his people, very conservative, and one who has fitted himself for the task that is before him, and he is supported in that task by a remarkably intelligent and gracious Queen. And this royal couple have won the confidence and the love of the Belgian people.

About two years ago King Albert paid a personal visit to the Congo. He spent some six months out there—went all through the country on foot or by canoe, and examined the possibilities and the probabilities which confronted him.

Under King Leopold the country was largely developed by *concessionaire* companies, and also by the government itself. The government was in the rubber business, which was inevitable. It was the only possible way of developing the country at that time and under those circumstances.

Large commercial companies have developed the United States to some extent. Massachusetts was developed by a large commercial company, and other portions of this country were. The great East India Company developed India for the English empire, and so it was in the Congo. But now things have changed. Under the new régime these

large *concessionaire* companies seemed destined to disappear. But these that already have franchises and rights will preserve them, though they will have a restricted area, and the Congo government, which formerly worked the rubber on about one-third of the Congo Free State, will gradually go out of business.

Formerly it was necessary for the government to be in the rubber business, on account of the fact that they needed revenue. It couldn't get revenue by import duties or by export duties, on account of treaty obligations. But they thought that by opening up the country to free competition they would so develop the rubber trade that the export duties on rubber would compensate them and, to a certain extent, enable them to carry on the government.

In 1910, in July, about one-third of the Congo Free State was declared open to free trade, and within the next three years practically the whole of the State will be opened to free trade in rubber, to whoever chooses to go into the trade.

At present there isn't a great deal of American capital interested in the Congo. There are two companies in which American capital is employed; one is the American Congo Co., of which nearly half the capital is American, and the other, the Congo Forestry and Mining Co., of which about 25 per cent. of the capital is represented by Americans. I hope that, as the time goes on, Americans will come in more and more and will trade and form companies and increase the commerce between the Congo and the United States. Part of that, I hope, will come under the American flag, which Mr. Nixon has spoken of, and I hope a few pounds will be left to the Belgian flag, because I think they are entitled to it as the producers of the goods. [Applause.]

A question has been raised as to the continuity of the Congo output. Up to the present the Congo rubber has been gathered in rather a primitive way, and in perhaps a somewhat expensive way. Laws have been passed regulating the way in which the rubber shall be gathered, so as not to ruin the plant, and also laws to compel the replanting. But all of this has been not always effective, on account of the fact that the native labor is very irresponsible. You send a native out in the forest to gather rubber, and you really don't know what he does.

Under the new régime, which has been started by King Albert, there are to be new plantations under the care of the State itself; and the State has set aside about \$200,000 or \$300,000 a year for starting up these new plantations, which it hopes will continue the rubber product. In addition to that, one of the companies, of which I have the honor to be a director, has received about 2,000,000 acres of land on which to start new plantations. It was the idea of the late King, and of the present King, that something should be done there to have a continuous product, and this company, of which I am a director, has started out with these 2,000,000 acres to set out part of it one year and part another year, and part another year, so as to have a continuous rotation of gathering of rubber, so that it shall be inexhaustible. I don't know yet what the result of that will be; because we have just started and only have a few hundred acres under plantation.

Gentlemen, one of the greatest of England's Lord Chancellors, when he was about to die, said that he had regret only for two things: one was that he had walked on a certain occasion when he might have ridden, and the other was that he had once made a speech when he might have kept silent. I may perhaps regret that I made an unnecessary speech tonight—and that will be on my dying bed only—but I think in the meantime the regret will be only on your side. [Cries of "No!" and applause.]

A TALK FROM THE TRADE.

The President introduced the next speaker as follows:

The City of New York has some very large, very thrifty and very capable suburban cities and towns. Among those is the City of Akron [Cries of "Hurrah!"] where is situated the factory or the factories rather, of The B. F. Goodrich Co. [Applause.] One of the bright particular stars of that great company is with us to-night. He may say what he wishes; we will subscribe to it. Mr. Howard E. Raymond. [Applause.]

Mr. Raymond said:

MR. PRESIDENT, GUESTS, AND FELLOW MEMBERS: Having survived the danger zone through which every public speaker passes—the soup course—so that I may present you a clean shirt front and also a bold personal front, I will start in to dabble with the wide latitude of speech which the President has just assigned me. He has thrown me evidently into the midst of a very large ocean, and he doesn't care whether I get to land on an English, French, American or German bottom; and I don't believe he cares whether I am a stray steamer; but I am going to make a desperate attempt not to sink.

So, then, this is the New England Rubber Club, *alias* The Rubber Club of America—an annexation of New York by New England. It is splendid!

Now, in searching for a subject—and I have only been searching since I sat here and listened to the brilliant preceding speakers—it occurred to me, as neither one of them had seized the opportunity of addressing you on the subject of the Club, that I myself, who have

never attended a previous dinner, and know absolutely nothing about this Club, am preëminently fitted to address you on that subject. [Applause.]

Now, with malice aforethought, I am going to endeavor to so mangle this subject that no other speakers, if there are others to follow me, will dare attempt it. [Laughter.]

And in comparison, perhaps, I might touch—well, I may say the subject will be largely "Clubs vs. Trade Associations"; because I am deeply interested in Trade Associations, and I think we have a particular field for a Club, as differentiated from a Trade Association. The Club takes in everything; the Trade Association narrows you down to a manufacturer or manufacturers of a class of goods that apply to a certain industry.

Tonight, I assume we have here rubber brokers—God bless 'em—[applause], and the manufacturers of fabric, and the manufacturers, perchance, of the inner tube of a self filling fountain pen, and the inner tube of a tire, and in between these is the great mass and multitude of manufactured products we all turn out collectively.

We have here in the Club the men who sell each other. [Laughter.] You can't get that in a Trade Association. And it is a grand thing for us to have reached the point where we can have a Club, and that is a splendid name—Club—when socially applied.

We have come into the broader sphere of New York. You have had to come down to the cyclone center where the wind blows, to gather a meeting of this size. I am rather impressed with the fact that the meetings have heretofore been smaller. It is no reflection on the New Englanders here—and I think they predominate at the moment—but they have now opened the door for us to come into this Association or Club, and so I want it to be called that, and not drift into a Trade Association.

Don't let this Club take up at any time the work of the Associations. That would be a mistake. You can't do it with a diversified membership, such as this Club has today and wants to have in the future. The Trade Association can follow a direct and concrete line to accomplish a specific object; because every member in that Association has the same object in mind. But we want to meet here socially, as buyer and seller, and know each other—know each other better than we ever have in the past—and just let it be a social organization.

Trade Associations take up credit, and I would hate to have my fellow member in my Club bothering about my credit. [Laughter.] It might be embarrassing to him, and a very bad thing for me. Trade Associations take up trade abuses. Sometimes they dabble in the unfair practices. They try to tell their members that they are not following the exactly legitimate channels of trade, in their efforts to boost their products. We don't want the members of the Club to do that, and so I say there is a big field, to my mind, for this organization.

It ought to grow—ought to meet once a year and have some speakers from among ourselves, as well as the brilliant speakers from outside; and if later on we get to know each other better, we might go into the general question of trade situations, and sniff in each other's pignen.

For instance, today the rubber trade is in perhaps a semi demoralized condition, caused, very largely, by our friends from the Congo, the rubber brokers, and so on. They raised the prices to a very high point, and then pulled the pegs out so fast that we couldn't even dig our toe nails in as we slipped down hill. Now, the consequence has fast created a hesitating buying market. The average buyer can't be expected to place goods on his shelves on a declining market, and if a man can't feel it now, he can't feel anything.

So I say that because our salesmen's reports are not as enthusiastic as they have been, and they haven't got that constant line of orders, with prices extended, that are customary with them, we say to ourselves, "the other fellow must be getting it because we are not getting it." Now, as a matter of fact, the business is not there, and because we think the other fellow is getting the business, we put in force practices that in ordinary times, and with the exercise of level, clear headed judgment, we would never possibly think of doing.

We run a great risk at the present moment of creating for ourselves a period of demoralization that will take several years to recover from—just because we believe the other fellow is getting the business. [Applause.]

I hope there won't be many occasions like this, when we have to put ramrods down the backs of our dress suits and lean on them strong and feel they are there; but it seems to me almost the psychological moment—the opportunity to show you the condition the trade is in today. It is just like a jelly fish—when anybody touches it, it shivers and shakes. Now, we don't want that. If we can have any interchange that will help things, and keep us from making bad breaks, that is all right; but don't let us feel that there is a great big sea of trade outside, and that we are not getting it because the other man is getting it. It is not there.

Gentlemen, I am not going to say much more. I want to emphasize the fact that you have got a Club today that compels esteem, and ought to be kept a Club, and not take up trade subjects, because the trade is well supplied with associations for that purpose.

I want to say that Mr. Pearson has made a very gracious apology, at the start of his speech, for almost everything that might have happened. But I am particularly keen about the way my name is placed on the official seating documents. I am down as H. G. Raymond. [Mr. Raymond's name is H. E.] My initials spell the two best things on earth—"He" and "Her" [laughter]—and I am rather keen on that. I call it to his attention, in case I should ever be commanded to attend another banquet.

I should like to say, as I close, that the preceding speakers were graciously invited to this banquet; I could tell that from the way they talked. I was commanded to appear here, and I obeyed the command in the interests of your worthy President and your entire Association, and I am only sorry that I was not privileged to enjoy membership with you many years ago.

Gentlemen, I thank you.

IN LIGHTER VEIN.

THE editor of *The Schoolmaster*, Mr. Creswell MacLaughlin, being on vacation from the seat of his serious labors, at Cornwall-on-Hudson, New York, had left behind all of him that savors of business, and entertained the guests with a succession of witty epigrams, funny stories suggested to him by the occasion, and rare bits of humorous philosophy of which he had deprived the readers of his pedagogic magazine for the doubtless more appreciative audience that gathers round a festal board. Such an after-dinner talk would, of course, be spoiled by trying to present it through the medium of a stenographer's notes.

RUBBER PLANTING UNDER OUR FLAG.

After Mr. MacLaughlin's speech the President said:

I have decidedly changed my mind with regard to that quiet burg known as Cornwall-on-Hudson. As our last speaker, and one who, if he is willing to tell us what he knows, will be most interesting, I want to introduce Professor Henry H. Rusby, who has spent much time in Mexico, and knows very much about what we would like to know.

Professor Rusby, after a pleasantly humorous introduction, got down to his subject as follows:

When Mr. Pearson asked me to speak this evening, he said he wanted me to speak on two subjects—first, something about the prospects for the growth of the guayule rubber shrub in Texas; and, second, the prospects for the successful cultivation of rubber trees in the Philippine islands.

I want to tell you, gentlemen, that I believe that in the whole realm of applied science there are very few things so difficult to do as to predict the results of an experiment in the commercial cultivation of rubber plants. I don't know of anything else more uncertain. As a matter of fact, the rubber business is pretty uncertain all the way through, except the Wall Street end of it. That is always certain, of course. You can always tell what you must expect on Wall Street, and you can make your calculations and base sound business policy on what is going to happen in Wall Street. Wall Street might be called the balance wheel which keeps the rubber market stiff.

To give you an idea of how difficult it is to state whether there is going to be success in the cultivation of rubber I will relate one or two occurrences. One of my friends said to me one day:

"I am thinking of investing in a rubber plantation in Mexico. I suppose you would know all about it and can advise me."

"Well," I said, "let us suppose that you are going to put \$10,000 in it."

That, it happened, was just the amount he was going to put in.

"All right," I said; "go to the bank and draw your \$10,000 in gold, and put it into two bags; put one of those bags in your safe; take the other out on a ferryboat and drop it into the middle of the North river, and you will save just \$5,000."

That was the uncertainty in those days. That wasn't in this last rubber growing flurry—this last one, you know, that surpasses the power of expression—but this was one that happened a good many years ago.

Since that time we have actually got to growing rubber, and I think, on the whole, it is promising; but as to how promising it is, I would rather advise somebody else about that than to put my own money in it. It don't cost you so much when you advise somebody else. It is the uncertainty of it.

Now, some of you know that there are some cactus plants. You know that there are a great many spiny things that grow on the desert that ignorant people call cactus that have nothing to do with cactus; but there are a few true cactus plants which contain milk, and in that milk there is a little rubber—not enough to be of economic importance, but it is an interesting scientific fact.

We were fortunate enough at the New York Botanical Garden to get some of those cactus plants growing there, and they were such a great success that Dr. Britton, when he had a certain visitor come

there, took that visitor into the greenhouse and proceeded to show him the rubber milk which would exude from these plants after they were cut. He stuck his knife into them and not a drop of rubber came out, though in the month before it had exuded freely.

I have myself gone through groups of rubber trees of exactly the same kind. There wasn't even a difference of variety, but one of them grew about 600 or 700 miles away from the other group, and the third one was about intermediate between the two. And in the same week, one of those groups of trees didn't yield one drop of rubber milk; another one yielded a considerable quantity, but it coagulated in the cut, and wouldn't flow; and the third group of trees would yield from one to two liters of rubber milk each, rich in rubber. Nobody can tell why it is. I tell you that there are very few of us scientific people who feel that we actually know any facts at all about the relations of the rubber latex to the life of the plant that produces it, and until we find that out, there is not much use of speculating about the rubber.

Now, you all know that Central American rubber tree, which ought to be known as *Castilleja*, although improperly known as *Castilloa*. We used to suppose it was one tree. Now there are at least ten different species, and half of them don't yield any rubber milk at all. When I am asked about the possibilities of the cultivation of the *Castilleja* rubber tree in the Philippine islands, how do I know? One which in Central America produces only a little rubber, may produce a great deal in the Philippines. It is largely guesswork. We can study it as carefully as we want to, and the man who is honest with himself doesn't want to say anything unless he has a good scientific basis for it. But I should say, Mr. President, that the chances for the cultivation of rubber trees of many of the kinds that we have, in the Philippine islands are very good. I think the climate of the Philippines is such that we could have the *Castilleja* grow well in certain sections. Some *Castilleja* trees are growing there at present and doing splendidly, and I expect to see success down there.

I do not believe in a country doing anything for which it is not fitted, and wasting its money, just for the mere sake of saying what it has done. Of course, there is a middle, conservative ground. But I wouldn't believe in trying to grow rubber plants in any territory of the United States, unless the territory was fitted for it. If there are two things, one of which is fitted for your own soil and another that is not, for heaven's sake grow it on the soil which is best fitted. But so far as rubber is concerned in the Philippines, I fully believe that we are going to see it grow.

Now, as to the growth of the guayule shrub in Texas—there is another very difficult problem. I would like to know if there is a man in this room who is able to say that he feels sure that the cultivation of the guayule shrub anywhere in the world is going to pay. I am not. I have studied it very carefully, and the only reason that I am inclined to believe that it will pay even in Mexico, its native country, is that the Rockefeller crowd have gone into it pretty carefully. [Cries of "No"! Well, I have heard it. They don't generally go into anything unless they are pretty certain it is going to succeed.

When we first studied that guayule shrub, we were told that it would take at least thirty years for it to reach the full production. After that we were told fifteen; then we were told that in five years, although it hadn't reached its full growth, it would still produce a great deal of rubber. So there are all those things still to be determined.

My friend, Professor Francis E. Lloyd, has studied it very carefully for a number of years, and he has established the fact that the guayule shrub can be cultivated; it can be propagated freely and cultivated under proper conditions. But, whether the time of production will be so far postponed that the interest on the investment and all the expenses connected with it will make it unprofitable, that is a thing that I do not think we can positively say until we try.

Now, as to guayule growing in Texas. There is a shrub growing in Texas which is very similar to the Mexican guayule, and closely related to it. The two plants have descended from some common stock, and if that common stock has produced in Texas a plant which is different from the one in Mexico—I ask those of you who know anything about the evolution of plants—doesn't it stand to reason that the climate of Texas is adapted to that one which developed there and not to the other one? I don't know about Texas, but I do think that there are parts of the desert territory of southern California where the guayule plant can be cultivated with success if this is possible anywhere. The only question is whether we can grow guayule anywhere, if we can't grow it in the regions that I have mentioned.

Before I close I want to tell you of a little incident. When I was listening tonight to the interesting and most instructive address of Mr. Nixon, I remembered an experience of mine back in 1886 that I thought would interest you, as rubber men.

In that year I made a voyage of thousands of miles which took nearly a year. I traveled in ships built in foreign countries, and which I bought in those foreign countries, and I put the American flag on the ships, and I flew it through the whole voyage. There wasn't a day when it wasn't there. The first ship I bought consisted

of seven logs tied together to form a raft. Some of you gentlemen may have been down to my pier in Bolivia, on the Napo river, and you know that little rocky shore. And that little river in places was so shallow that the logs of the raft grated on the stones as they went over. That is where I bought my first ship, and over it I raised my American flag. When we had gone so far that we had a little deeper water and could float a bigger raft, we kept the flag still afloat, until we got down still further and made a "dug out" canoe out of a huge log, almost as long as this table, and the flag floated over that. When we went through the valley of the Madeira I had about seventy men, and perhaps seven or eight boats, and the flag floated there, and when we finally got to the lower Amazon and we boarded an English river steamer, I asked permission of the captain, because we had had this flag so long, to let me stick it up on the boat, and it was hoisted all the way to Peru. So there is a case where somebody carried the American flag in foreign waters.

Well, about that journey, gentlemen, another thing that will interest you, perhaps, is the fact that in 1886 I bought rubber at \$3.60 for 28 pounds. And how much is that? About 13 cents a pound. I sold it afterwards at an advance of 35 per cent., and I thought I had made a big thing out of it. The best rubber in this country then was worth about 65 cents a pound. The most interesting thing, however, was that when I sold out my rubber and got Bolivian dollars for it, those dollars were worth 22 pence, and I exchanged them dollar for dollar for Brazilian money, worth 42 pence on the dollar—nearly 100 per cent. on exchange. And then, Mr. Pearson, some people have got the gall to say that scientific men haven't got business ability. [Applause.]

GOOD NIGHT.

The President said:

Now, in saying good-night, let us rise and consider our rising a general vote of thanks to our distinguished guests and speakers this evening.

All rose.

SOME OF THE LETTERS OF REGRET.

Mr. Paul Morton, whose lamented death a few days later is reported elsewhere in this paper, wrote regretting his inability to accept an invitation to the dinner.

From the Governor of New York:

Delayed replying invitation January 11., hoping could arrange acceptance, but obliged to decline, with much regret. Accept appreciation for yourself and friends. JOHN A. DIX.

From the President of the United States Rubber Co.:

I had hoped to be able to be with you at the dinner of The Rubber Club of America this evening, but find it impossible to do so. I know that you will excuse me, and I shall trust another year to have the pleasure of meeting with you.

Wishing you every success, which I know from past experiences you will have, believe me always, Very sincerely yours, SAMUEL P. COLT.

From Mr. William M. Ivins:

I regret very much that my professional engagements in Washington will detain me there until Thursday, and that therefore I shall be unable to attend the dinner of The Rubber Club of America to be held on January 11. Very truly yours, WILLIAM M. IVINS.

AT THE PRESIDENT'S TABLE.

Those seated at the President's table [see the frontispiece to this issue], naming them from left to right, were Messrs. J. O. Stokes, Charles A. Daniel, H. W. DuPuy, A. M. Paul, H. E. Raymond, Ex-Governor A. O. Bourn, Sidney Ussher, D.D., L. Dewart Apsley, Hon. Lewis Nixon, Henry C. Pearson, Hon. J. Gustavus Whiteley, George B. Hodgman, Professor Henry H. Rusby, Frederic C. Hood, Henry Spadone, Arthur W. Stedman, John H. Flint, and Cresswell MacLaughlin.

The reception committee at the dinner consisted of the following members of the club: H. W. French, George H. Mayo, F. D. Balderston, R. L. Chapman, F. H. Appleton, W. E. Barker, Charles J. Bailey, W. H. Gleason, W. J. Kelly, George P. Whitmore.

No banquet that the club has given was as notable in arrangement, in the brilliancy of speakers and in attendance, with the possible exception of that at the Hotel Somerset, Boston, when the Hon. L. D. Apsley was president.

MEMBERS AND GUESTS ATTENDING.

A
Adelbert H. Alden. (New York Commercial Co.)
John Victor Alden. (New York Commercial Co.)
Edward B. Aldrich. (Continental Rubber Co.)
A. J. Anderson. (Essex Rubber Co.)
L. E. Appleton. (F. H. Appleton.)
L. Dewart Apsley. (Apsley Rubber Co.)
J. Hague Armitage.
Charles H. Arnold. (Poel & Arnold.)

B
Robert Badenhop. (Robert Badenhop.)
Charles J. Bailey. (C. J. Bailey & Co.)
Collier W. Baird. (Rubber Trading Co.)
Robert B. Baird. (Rubber Trading Co.)
Robert L. Baird. (Rubber Trading Co.)
William T. Baird. (Rubber Trading Co.)
Frank D. Balderston. (United States Rubber Co.)
Walter S. Ballou. (United States Rubber Co.)
William E. Barker. (United States Rubber Co.)
O. A. Barnard. (J. H. Lane & Co.)
Charles W. Barnes. (United States Rubber Co.)
William F. Bass. (General Rubber Co.)
Theo. W. Bassett. (U. S. Rubber Reclaiming Co.)
Harold H. Bedell. (Bourn Rubber Co.)
E. W. Belcher. (American Hard Rubber Co.)
J. Warren Bird. (Malaysian Rubber Co.)
Benjamin Booth.
Augustus O. Bourn. (Bourn Rubber Co.)
Augustus O. Bourn, Jr. (Bourn Rubber Co.)
S. W. Bourn. (Bourn Rubber Co.)
James Boyd. (James Boyd & Co.)
Capt. A. A. Brigham.
Richard D. Brixey. (Kerite Insulated Wire and Cable Co.)
Andrew H. Brown. (A. T. Morse & Co.)
A. W. Brunn. (Rubber Import Co.)
Ira F. Burrham. (Stoughton Rubber Co.)

C
A. H. Canfield. (H. O. Canfield Co.)
C. C. Case. (Revere Rubber Co.)
J. H. Chadbourne.
J. J. Chandler.
R. L. Chipman. (George A. Alden & Co.)
E. H. Clapp. (E. H. Clapp & Co.)
Charles A. Coe. (United States Rubber Co.)
William T. Cole. (Fabric Fire Hose Co.)
D. B. Collins. (Oxford Tripoli Co.)
A. J. Congdon. (New York Insulated Wire Co.)
A. J. Conlin. (Philadelphia Rubber Works.)
A. Boyd Cornell. (Empire Rubber Manufacturing Co.)
E. E. Curner.
D. A. Cutler. (Continental Rubber Co.)

D
Charles A. Daniel. (Quaker City Rubber Co.)
Dr. Frederick Danneth.
Charles J. Davol. (Davol Rubber Co.)
Fred. W. Dunbar. (New York Commercial Co.)
Wilmer Dunbar.
Harry T. Dunn. (The Fisk Rubber Co.)
H. W. DuPuy. (Pennsylvania Rubber Co.)
Walter Dutton. (Continental Rubber Co.)

E
R. M. P. Eagles. (J. Spencer Turner Co.)
W. P. Earle, Jr. (Earle Brothers.)
C. F. Edgerton.
Charles A. Emerson. (United States Rubber Co.)
R. H. Ernest.

F
Eberhard Faber. (Eberhard Faber.)
Lothair W. Faber. (Eberhard Faber.)
Thomas F. Falls. (Birmingham Iron Foundry.)
E. E. Fay. (Boston Woven Hose and Rubber Co.)
D. Feinburg. (The Loewenthal Co.)
John J. Field. (New Jersey Carspring and Rubber Co.)
M. P. Fillingham. (Birmingham Iron Foundry.)
H. S. Firestone. (Firestone Tire and Rubber Co.)
John H. Flint. (Tyer Rubber Co.)
W. L. Fort.
Frank F. Fox. (Rubber Trading Co.)
H. W. French. (New York Commercial Co.)
H. P. Fuller. (E. H. Clapp & Co.)

G
Hoskinson Gates.
James F. Giles. (American Hard Rubber Co.)
Alfred A. Glidden. (Hood Rubber Co.)
Wallace L. Gough. (W. L. Gough Co.)
Fred. Gove. (New York Commercial Co.)
N. Lincoln Greene. (American Rubber Co.)

H
George E. Hall. (Boston Woven Hose and Rubber Co.)
E. W. Harral. (Fairfield Rubber Co.)
Matthew Hawe. (Gutta Percha and Rubber Manufacturing Co.)
Daniel Hawkins. (Merchants' Rubber Co.)
J. J. Hawkins. (United States Rubber Co.)
Eliot Henderson. (Manhattan Rubber Manufacturing Co.)
Ira W. Henry. (Bloomington Rubber Co.)
Henry F. Hering. (New York Rubber Co.)
George F. Hichborn. (United States Rubber Co.)
Edward H. Hicks.
Henry S. Higgins.
William Hillman. (Peerless Rubber Manufacturing Co.)
George B. Hodgman. (Hodgman Rubber Co.)
S. T. Hodgman. (Hodgman Rubber Co.)
Frederic C. Hood. (Hood Rubber Co.)
M. G. Hopkins. (A. T. Morse & Co.)
H. B. Hubbard. (United States Rubber Co.)
E. E. Huber. (Eberhard Faber.)
F. H. S. Hyde.

J
Ernest Jacoby. (A. T. Morse & Co.)
F. Coit Johnson. (J. H. Lane & Co.)
J. Johnston.
Frederick H. Jones. (Tyer Rubber Co.)

K
Julius Kahn.
Welling Katzenbach. (Katzenbach, Bullock & Co.)
E. B. Kelly. (Mechanical Fabric Co.)
William J. Kelly. (Poel & Arnold.)
H. L. Kenyon. (Kenyon Co.)
M. L. Kramer.

L
H. W. Laird. (Earle Brothers.)
Claude Lashelle.
P. W. Litchfield. (Goodyear Tire and Rubber Co.)
A. Lloyd.
G. A. Ludington. (The Fisk Rubber Co.)

M
J. F. MacGuire. (Republic Rubber Co.)
Creswell MacLaughlin.
A. H. Marks. (Diamond Rubber Co.)
Henry Marshall. (Waterbury Co.)
Ed. Maurer. (Ed. Maurer.)
George H. Mayo. (William F. Mayo & Co.)
Dr. Frederick J. Maywald.
John J. McGill. (Dominion Beiting Co.)
F. R. McKenna. (Bourn Rubber Co.)
L. P. McMichael. (L. P. McMichael.)
George E. Melius. (H. O. Canfield Co.)
Otto Meyer. (A. T. Morse & Co.)
W. B. Miller. (Diamond Rubber Co.)
Henry Montgomery. (New York Rubber Co.)
Herman Muchstein. (The Loewenthal Co.)
C. Edward Murray. (Empire Rubber Manufacturing Co.)

N
Hon. Lewis Nixon.
Albert Numbers. (Thermoid Rubber Co.)

O
C. H. Oakley. (Essex Rubber Co.)
James E. Odell. (James E. Odell.)
H. G. Otis. (Westinghouse Electric and Manufacturing Co.)
R. J. Owens. (Boston Woven Hose and Rubber Co.)

P
Wallace G. Page. (Hood Rubber Co.)
R. E. Paine. (United States Rubber Co.)
Theron R. Palmer. (Continental Rubber Works.)
W. H. Palmer. (United States Rubber Co.)

Forest H. Parker. (George A. Alden & Co.)
John S. Patterson. (Revere Rubber Co.)
Henry C. Pearson. (THE INDIA RUBBER WORLD.)
Alexander M. Paul. (Davidson Rubber Co.)
E. F. Pfaff. (THE INDIA RUBBER WORLD.)
Edward Phipps. (United States Rubber Co.)
W. L. Picher. (Easthampton Rubber Thread Co.)
Walter E. Piper. (Boston Rubber Shoe Co.)
William Poole. (New York Insulated Wire Co.)
George J. Prescott.
F. C. Pusinelli. (Heilbut, Symons & Co., London.)
George E. B. Putnam. (Boot and Shoe Recorder.)

R
Howard E. Raymond. (The B. F. Goodrich Co.)
Henry D. Reed. (Bishop Gutta Percha Co.)
Arthur Reeve. (United States Rubber Co.)
Edward R. Rice. (United States Rubber Co.)
Robert L. Rice. (Hood Rubber Co.)
John P. Rider. (New York Rubber Co.)
P. L. Rider. (Worcester Rubber Co.)
Prof. Henry H. Rusby.
W. G. Ryckman. (W. G. Ryckman.)

S
R. P. Sachs.
W. E. Sanders. (Thermoid Rubber Co.)
Homer E. Sawyer. (United States Rubber Co.)
George L. Schneller.
Hugh Scott. (Philadelphia Rubber Works.)
Frank A. Seiberling. (Goodyear Tire and Rubber Co.)
S. J. Sill. (Hewitt Rubber Co.)
Henry Spadone. (Gutta Percha and Rubber Manufacturing Co.)
R. F. Spencer. (United States Rubber Co.)
E. W. Spurr. (J. H. Lane & Co.)
Arthur W. Stedman. (George A. Alden & Co.)
E. H. Stedman.
Charles E. Stokes. (Home Rubber Co.)
J. Oliver Stokes. (Thermoid Rubber Co.)
Robert J. Stokes. (Joseph Stokes Rubber Co.)
W. G. Stokes. (Joseph Stokes Rubber Co.)
Griswold Stowe. (Stowe & Woodward.)
Walter I. Swasey.

T
A. B. W. Tallman. (A. B. W. Tallman.)
L. H. Thomas. (Poel & Arnold.)
W. W. Thon.
A. D. Thornton. (Canadian Consolidated Rubber Co., Limited.)
Arthur F. Townsend. (Manhattan Rubber Manufacturing Co.)
E. L. Toy. (Buffalo Rubber Co.)

U
Rev. Sydney Usher, D.D.

V
Harold Van der Linde. (Continental Rubber Co.)
Lindley Vinton. (Bartica Estates, British Guiana.)
John J. Voorhees. (Voorhees Rubber Manufacturing Co.)

W
Elston E. Wadbrook. (Poel & Arnold.)
F. W. Wadbrook. (Poel & Arnold.)
F. D. Wanning. (Birmingham Iron Foundry.)
W. H. Wanning. (Birmingham Iron Foundry.)
A. W. Warren. (Hodgman Rubber Co.)
E. F. Waterbury. (Waterbury Co.)
Dr. E. T. Waterhouse. (Hawaiian Rubber Growers' Association.)
Edward Webber.
Hon. James Gustavus Whiteley.
George A. Wies. (Eureka Fire Hose Manufacturing Co.)
Elisha S. Williams. (Rubber Goods Manufacturing Co.)
Warren Williams. (The Hodgman Rubber Co.)
Charles T. Wilson. (Charles T. Wilson.)
Fred. Wilson. (Thermoid Rubber Co.)
Charles E. Wood. (New York Commercial Co.)
F. R. Woodward. (Stowe & Woodward.)
Bertram G. Work. (The B. F. Goodrich Co.)
W. W. Wuchter. (Swinehart Tire and Rubber Co.)

Specifications for the Purchase of Materials—II.

By Frederic Dannerth, Ph.D.*

THE manufacturers' criticism of a Specification, before the same is issued, is to-day regarded as a most important part of the proceedings. The old idea that the consumer was to dictate to the manufacturer what the former wanted has given way to the broader view—namely, that the specification should contain or should represent the best that is known on the subject, no matter where the information has been obtained. To leave out the other party to the contract is unwise, unfair, short-sighted and foolish. The specification should be so drawn that the manufacturer can actually see that he has had a part in its making.

After criticisms from all those qualified to criticize have been received, the provisional specification is remodeled so as to include all suggestions which may be of actual value. In those cases where criticisms conflict, it has been observed that this is frequently due to local conditions. There is one pre-eminent thought that appears worthy of careful consideration in the whole mode of procedure—namely, the greater the care, the larger the amount of study and the more well directed time and effort that are put upon the specification before it is issued, the less will probably be the difficulty connected with it after it has once become a part of the contract. It might, in fact, be said that the most valuable specification represents the fruition of the studies of those who make investigation into the properties of useful materials, and of those who use them.

VALUE OF CHEMICAL DATA.

When specifications for steel were first issued there was opposition on the part of manufacturers to the insertion of chemical data. They claimed that the consumer should only specify the physical properties of the metal and exclude or limit by chemical data only the objectionable constituents, leaving the steel maker free to vary those constituents (upon which the most valuable properties of the steel depend) according to his own ideas. Now it is clear that a certain set of physical properties produced by high carbon and low manganese in steel may yield a steel more valuable to the consumer than approximately the same physical properties produced by lower carbon and higher manganese, or the interchange of the constituents commonly affecting the physical properties of steel. To repeat what has been previously said: A good specification is the result of the joint effort (1) of those who know steel from its behavior while it is being manufactured, and (2) of those who know steel from its behavior while in service.

SIZE OF SAMPLE FOR TESTING.

It has been found difficult to make a hard and fast rule as to the weight or volume of material which should be represented by one sample. Where the material is made in batches, and the sample is selected at random, the sample obviously represents that batch. In the case of oils and paints the question of sampling is more difficult. Such shipments are made up of material resulting from a number of like operations, without any certainty as to uniformity in the output of each complete operation. In such cases the sampling must needs be rather arbitrary, but if there should be any indication of lack of uniformity in the shipment, an amendment to the specification is probably called for.

NUMBER OF SAMPLES TAKEN.

Let us now consider the question: How many individual parts shall make up the average sample? If the shipment consists of 20,000 pounds of soap, shall we take one pound for examination or shall we take several pounds from different parts of the ship-

ment? If 50 barrels of linseed oil have been received, shall we sample one barrel or every barrel? Some consumers contend that the shipment is presumed to be uniform, and that the number of samples should therefore be limited, small unimportant variations being allowed for in the specifications.

RE-TESTS.

When a shipment is received, sampled in the prescribed way, tested and found wanting—what then? The producer frequently asks for another test, in the hope that this may show more favorable results and allow the material to slip in. If the second test is favorable, the consumer is naturally anxious to make a third or "decision" test. Specifications are not drawn for the purpose of making it easy for irregular and possibly carelessly made material to be accepted. It is far better to make the limits of the specification wide enough, when they are first drawn to cover all the uncertainties in manufacture and eliminate carelessness, bad judgment, or any attempt to sell an inferior product at the price of a good one.

BRANDING REJECTED MATERIAL.

Another difficult point is covered by the question: "Is it possible to so draw a specification that material which has once been rejected will not be offered a second time?" The Government has adopted the system of placing marks on rejected shipments, a practice which lowers the value of the so rejected material and makes it necessary for the manufacturer to raise the price in order to cover himself. But for the larger number of products which are covered by specifications (oils and soaps) identification marks are unavailable. One way in which to obviate any difficulty is to insert in the contract a clause stating that the manufacturer must pay return freight on rejected material. One purchasing agent settles doubtful cases by refusing to accept future bids from firms who make it their practice to return rejected goods.

HOW SPECIFICATIONS AFFECT THE BUSINESS OF THE PRODUCERS.

Many manufacturers object to specifications on the ground that they are annoying and really serve no good purpose; others have distinctly requested them. Some consider a difficult specification a direct advantage as it eliminates the competition of inferior products. It must ever be borne in mind that low prices must be the result of some unusual manufacturing facilities or, as is more frequently the case, the indicator of poor quality. A good specification is the best protection that can be offered the manufacturer of honest goods.

HOW SPECIFICATIONS AFFECT PRICES.

In many cases the consumer is afraid to adopt specifications, thinking that the price of the product will be raised by the producer. Experience has in fact shown that after the producers have become accustomed to the new specifications, their prices invariably drop to a greater or less extent. This observation has been variously explained: (1) as being due to the fact that all bidders are bidding on the same quality of goods; (2) the material defined in a specification represents what might be called "standard material" so that manufacturers can, without great risk, fill in idle time with its manufacture; (3) as the material is "standard" the manufacturer can without fear of loss purchase the constituents in a favorable market.

RULES GOVERNING SPECIFICATIONS.

In addition to the points previously emphasized, there are given below certain rules (by Dudley) which may be followed to advantage by those who draft specifications.

*Consulting Chemical Engineer, Philadelphia.

1. All parties whose interests are affected by a specification, should have a voice in its preparation.
2. The limitations contained in a specification may be derived from any source of knowledge and the tests may be microscopic, physical or chemical.
3. The specification should contain all the information which is needed by those who are to enforce it; this includes the chemist, the engineer, the purchasing agent, and the superintendent.
4. The service which the material is to perform, in connection with reasonably feasible possibilities in its manufacture, should determine the limitations of a specification.
5. Proprietary articles and products made by processes under the control of the manufacturer cannot, from the nature of the case, be made the subject of specifications. The consumer may, however, determine the chemical and physical properties of any preparation and incorporate these in a specification, in case that substance has given eminent satisfaction.
6. The sample for testing must always be taken at random by the consumer. The amount of material represented by one sample must be determined by the nature of the material, the value of the material, its probable uniformity, and its importance.
7. Average samples, made up of a number of samples, should only be prepared in cases where the limits of the specification are so narrow that they do not cover the ordinary irregularities of good practice in manufacture.
8. Re-tests of material which has once been rejected should be allowed only on very good grounds. They are justified when there is a doubt as to the exactness of a test.
9. If it is desired to sell rejected material to a consumer, a concession in price must be made, but rejected materials should never be used in places where they may endanger life and property.
10. When a consumer has purchased material on specification it is unfair to ask of the manufacturer any guarantee covering the behavior of the material in service.
11. It should as a rule be unnecessary to mark rejected material, when dealing with reputable firms, but if necessary an inconspicuous private mark may be applied. In any case the manufacturer should be obliged by contract to pay return freight on rejected shipments.
12. Specifications should be examined, and if necessary revised, six months after they have first been put in force. This will allow for the introduction of the knowledge and experience gained by actual usage.
13. In testing materials, if the results are just outside of the prescribed limits, an allowance should be made for the probable error in the method of making the test, but gross discrepancies should in every case lead to a rejection.
14. A complete workable specification should combine within itself the harmonized antagonistic interests of both the producer and the consumer. It should have the fewest possible requirements consistent with securing satisfactory material, should be so comprehensive as to leave no chance for ambiguity or doubt, and, above all, it should embody within itself the results of the latest and best studies of the properties of the material which it covers.

NEW TRADE PUBLICATIONS.

THE catalogues for 1911 for the various footwear companies embraced in the UNITED STATES RUBBER Co., already mentioned [see INDIA RUBBER WORLD—January 1, page 128] have been followed by a Gross Price List and also a Net Price List, dated January 1, for each of the companies, these being uniform in size and style— $3\frac{1}{2} \times 6\frac{1}{4}$ inches, 16 pages. They are accompanied by net price lists of Felt Boot Combinations, "Hastings" and "Michigan" brands.

SPRINGFIELD RUBBER Co. (Springfield, Massachusetts), who are

jobbers of rubber goods generally, issue a comprehensive and tasteful appearing 1911 Catalogue from their footwear department, under the title "Full Description of Kinds, Styles and Sizes of Rubber Boots, Shoes, Combinations and Tennis." The footwear brands they distribute are the product of the Boston Rubber Shoe and Woonsocket factories.

CAPEN BELTING AND RUBBER Co. (St. Louis) issue an illustrated descriptive catalogue of Belting and Accessories which nearly approaches their avowed ideal of a catalogue—one that shall be "practical, useful, and attractive." This book contains much detailed information of use to belt users, and lists leather, rubber and balata beltings, giving no fewer than 16 pages to the latter. [6" x 9". 96 pages, loose leaves.]

THE SCHAEFER RUBBER Co. (Cincinnati and Detroit) issue a new catalogue of Rubber Goods for the Home, illustrated with cuts of about all the lines of products covered by this title. [4½" x 5¾". 128 pages.]

CALENDARS FOR 1911.

ONE of the handsomest calendars for the new year comes from the Adamson Machine Co. (Akron, Ohio). The large card on which are attached monthly tear off leaves is embellished with a reproduction by color photography of an original painting by Dobson, entitled "The New Arrival."

The calendars sent out by the different rubber companies are not only more artistic and attractive in appearance year after year, but they are beginning to cover more wall space. The new calendar of the Lambertville Rubber Co. (Lambertville, New Jersey) is 24 x 36 inches. Its embellishing feature is "The Lambertville Girl"—a picture in colors, life size, of a young woman equipped for golfing.

John Royle & Sons (Paterson, New Jersey) send out a neat booklet labeled "Reminder and Daily Memoranda," in flexible leather, vest pocket size, containing, in addition to calendar and numerous details valuable for reference, a space for entries for every day of the year.

The G & J Tire Co. send out a neat desk calendar with monthly tear off leaves, mounted on a brass stand which may be used permanently by the substituting of new calendar pads.

The calendar of the Western Rubber Co. (Goshen, Indiana) is adorned with a reproduction, by color photography, of a painting entitled "Morning," showing a scene in the vale of the Treignac, France, by the notable artist Gaston Anglade.

American Rubber Manufacturing Co. (Emeryville, California) send a calendar on a card $6\frac{1}{4} \times 9\frac{3}{4}$ inches, carrying a picture in colors, "My Chauffeur," from a painting by Philip Boileau, the chauffeur in this case being a beautiful girl. It is one of the most attractive calendars received.

Meyer Cohn, a waste rubber merchant of Hanover, Germany—with United States offices at No. 117 Chambers street, New York—sends out a handsome "Notiz-Abreiss-Kalender für das Jahr, 1911," suitable for wall use, and containing a tear off leaf for each day in the year, with spaces for daily memoranda.

A PAN AMERICAN CONFERENCE.

AN invitation comes to THE INDIA RUBBER WORLD to be represented at a "Pan American" commercial conference, to be held under the auspices of the Pan American Union, in its new building in Washington, during the week of February 13-18. The discussion is planned of an expansion of reciprocal trade relations between the United States and the twenty Latin-American countries, to be participated in by representatives of commercial and other interested organizations, private firms, educational institutions, and so on. It is expected that the Rubber Club of America will be represented, and this journal hopes that the proposal of this conference, by the able director general of the Pan American Union, the Hon. John Barrett, will meet a cordial reception among those for whom it is intended.

Congo Rubber and the Antwerp Market.

IN their annual review of the Antwerp rubber market for 1910 Messrs. Grisar & Co., the official brokers, again confine their remarks mainly to the decline of the natural supplies in the Belgian Congo (formerly the Congo Free State), and the outlook for rubber cultivation there. First, however, may be introduced a table of the arrivals of rubber at Antwerp during the last ten calendar years:

YEARS.	Congo State.	Other Sources.	Total.
1901	Kilos 5,417,456	431,742	5,849,202
1902	4,992,954	411,031	5,403,985
1903	5,180,401	546,082	5,726,483
1904	4,723,618	1,040,238	5,765,856
1905	4,442,607	1,271,121	5,713,728
1906	4,593,759	1,178,303	5,772,062
1907	4,346,141	708,332	5,054,473
1908	4,262,531	772,813	5,035,344
1909	3,492,332	1,193,626	4,685,958
1910	3,105,357	953,319	4,058,676

Messrs. Grisar & Co. say:

RUBBER PLANTING ON THE CONGO.—The period of transition through which the Belgian Congo is at present passing, in the course of the change from the old to the new government, finds expression in a certain reduction in the exportation of rubber, but it is permissible to suppose that this decrease will only be temporary, especially if private enterprise applies itself to the obtaining of everything possible from the rich sections thrown open to its commercial activity. It is really to be wished that our countrymen will neglect no effort to profitably exploit the plans made by the government, with a view to encouraging the development of commerce in the colonial territory.

Among these plans, which are the subject of an order, dated March 22, 1910, it is particularly stated that the vine rubber must now be collected by means of incisions, by gashes, or by cutting the plant. It is in every case forbidden to root up or cut up into sections the roots of the plant, or to cut, gash or reduce to sections, the principal stem in the part that rises to 1.50 meters above the ground. And in regard to the latex of rubber trees, it must only be collected by means of incisions or practical gashes in the bark of the trunk, without penetrating into the cambium. In another part are also indicated certain modifications in the cultivation of rubber yielding trees in the Belgian Congo.

A certain number of plantations of caoutchouc *lianes* have been abandoned, the expense entailed by their maintenance being out of proportion to the results to be expected. Moreover, a large number of these *lianes* have attained such a height that they surpass the vegetation which usually forms the undergrowth of a Congo forest and their further growth is also assured. These plantations may, however, be regarded as re-plantations, undertaken with a view to preventing the impoverishment of the forests in rubber yielding trees and they cannot be regarded as regular plantations.

There should be no further prosecution of the cultivation of these plants, except in certain stations, of a purely experimental character. The plantation, in this case, should be started in the open field, and the *lianes* thus obtained should be set apart for experiments by tapping and by crushing of the bark with the aid of improved machines.

The cultivation of the *Hevea Brasiliensis* will undergo a material extension in the equatorial portion of the territory, and especially in the districts of the Equator and of the Bangala, where the rainfall is most copious and most regular. There have been, so far, twelve centers designated, of which five are in Bangala and two in the Equator. Three parties are at present traveling through the districts named, in order to study the locations most favorable for the establishment of *Hevea* plantations.

The selection of suitable territory is a most important matter; the yield speedily shows, in the Congo, the result of any error in the location chosen; the fall of rain is no more than moderate, even in the equatorial regions.

A sufficiently large quantity of *Hevea* seed has been imported from Ceylon. A goodly number of *Hevea* plants at Coquilhatville have come into full bearing. More than 350,000 seeds have been collected and placed in the nursery of the botanical garden of Eala; their germination has been very satisfactory.

The cultivation of *Manihot Glaziovii* will be extended at the station of Bokala (Central Congo). The growth of this variety there is rapid, and the experiments in the extraction of latex made on trees of ten years of age has given satisfactory results.

Certain stations in the Uelé are equally well adapted to the cultivation, on a large scale, of this tree, the climate being characterized by a very pronounced dry season, which seems favorable to the normal growth of the *Manihot*.

Experiments in the extraction of latex made on the *Manihot Glaziovii* have given satisfactory results, and certain trees, subjected to regular

tapping during several months, have yielded more than a kilogram of dry caoutchouc. These experiments are being continued, with a view to ascertaining approximately the annual production of trees of a certain age.

The *Funtumia elastica*, while developing in a very satisfactory manner in certain sections of our colony, appears to present quite considerable difficulties as regards regular and successive utilization. As a fact, this variety does not appear to possess, to an equal extent with the *Hevea Brasiliensis*, the faculty of submitting to repeated tappings during a prolonged period. The production of latex at the first tapping is far superior to that of the *Hevea*, but after several days the secretion ceases. The method of tapping employed for the *Hevea* does not seem, moreover, suitable for the *Funtumia*. Systematic tappings were made after determining the process best adapted for the utilization of this tree.

Regular experiments have already been made at the station of Libenge (Ubangi), and the results are encouraging; the quantities of caoutchouc obtained have, however, been very inferior to those yielded by the *Hevea*, which was to be expected.

QUALITY OF CONGO RUBBERS.—The quality of the Congo rubber leaves nothing to be desired, and the parcels received this year fully maintain the standard previously reached. We would, nevertheless, impress once more on the shippers the necessity for withdrawing the gathered product as quickly as possible from the disastrous effects of the tropical sun; too long a stay in the humid surroundings is incompatible with the good preservation of the caoutchouc, especially where it is stored in uncleanly warehouses or those subject to flooding.

The plantation varieties and divers sorts have proved difficult to assimilate on the part of buyers. The prices realized represent, to a great extent, the equivalents of foreign markets.

QUALITY OF PLANTATION RUBBERS.—It would appear to us a matter of interest to examine, at this point, into the present intrinsic value of plantation rubber, compared with that of Pará fine.

At the beginning, when the plantations produced only infinitesimal quantities, plantation rubber brought a price about 10 to 15 per cent. higher than Pará, because of its great purity and its light and uniform color, combined with its large yield, allowing its use for certain special, but limited, purposes, for which, while a fine looking gum was required, great elasticity was not demanded. Opinions were fairly divided on the question as to whether the elasticity of plantation rubber was equal to that of Pará forest rubber, or whether it was inferior to the latter. Some claimed that its elasticity is inferior, because it is furnished by young trees, while for Pará only old trees are tapped; others attribute this condition to the method of coagulation in use on the plantations. We believe that the latter are right. As a fact, the method of coagulation employed in Amazonia could not be applied to relatively small quantities of latex collected separately and daily from the thousands of subjects on plantations of a tappable age. After a slight addition of water is made to the latex for the purpose of retarding the coagulation until it reaches the factory, the process is accelerated by a slight addition of acetic acid. If this is not made quantitatively and judiciously the excess of acid appears to deprive the rubber of part of its elasticity.

Apart from this, the latex supplied by the *Hevea* in the Far East possesses, according to the most competent experts, the same qualities as that from the Pará forests. It is, therefore, in the method of coagulation, that we must seek the solution that will place the plantation rubber absolutely on a level with that from Pará. Every effort of specialists is being brought to bear just now on the study of this question, and it is reasonable to anticipate the solution of this important problem in a short time. The great manufacturers will then not hesitate to finally change their machinery to enable them to use the new product as regularly as the Pará, which is not the case today, and this explains why the premium formerly paid for the rubber furnished by plantations has disappeared, although, in manufacturing, this product continues to give a superior result, compared with Pará.

COMPARATIVE ANTWERP PRICES (FRANCS PER KILO).

	Dec. 31, '09.	Dec. 31, '10.	De-crease.
Kasai, red, I.....	14.00@14.37	13.50@13.75	4.34%
Loanda II kind.....	11.00@11.50	11.50@12.00	4.34%
Kasai, black.....	14.00@14.37	13.25@13.75	4.34%
Equateur, Ikelemba, Lo- pori, etc.....	14.75@15.00	13.25@13.75	8.33%
Upper Congo, ordinary....	13.25@13.50	12.25@12.67	6.11%
Aruwimi Uelé	13.25@13.50	12.50@13.00	3.70%
Mongala strips.....	13.25@13.50	12.50@13.00	3.70%
Red thimbles (root rub- ber)	9.00@ 9.75	10.25@10.75	10.82%
b Para fine	7s. 2d.@7s. 6d.	5s. 9d.@5s. 9½d.	22.77%
[a Increase.]			
[b In English money, per pound.]			
[Ten francs per kilogram = 87½ cents per pound.]			

Our Esteemed Japanese Contemporary

THE enterprise displayed by the Japanese in the india-rubber industry, and the progress made in its development, though of such recent origin in their country, is indicated in the well filled columns of our excellent contemporary. *Gomu Shimpō* ("India Rubber News" or "Gazette"), edited and published monthly in Tokio by Mr. T. Takeuchi, with Mr. T. Sato as associate. Judging from the substantial appearance of the *Shimpō* it must enjoy a good support, but however extensive its circulation the paper probably is not seen by many readers of *THE INDIA RUBBER WORLD*, for whose benefit is reproduced on this page the headpiece of the Tokio publication.

The leading article in the issue of *Gomu Shimpō* for November 10, 1910, is an editorial on india-rubber cultivation, a subject which appeals to the interest of the Japanese, not only in connection with the future supply of raw material required by them, but also because they entertain hopes of cultivating rubber profitably on the island of Formosa, now owned by Japan. There are further articles on "The Most Recent Discovery Relating to Rubber Plantations," "The South China Bank in Rela-

very pronounced. Taking up at random an early number of this pioneer American journal, one finds only about 42 per cent. of its reading matter devoted to rubber and allied subjects, and a good part of this was filled with a chapter in an excellent history of Charles Goodyear, which the editor compiled and published serially. Other articles in this pioneer rubber journal related to sea sickness, tippling in Ireland, fairies in Great Britain, and the like, together with jokes and poems. The new Japanese paper, it will be seen, is doing somewhat better.

And the early New York paper had only 16 advertisements of rubber manufacturers and dealers in factory supplies, though there were over a hundred rubber factories in the United States at the time, with millions of capital invested and many millions of dollars' worth of products.

Speaking of advertisements, *Gomu Shimpō* makes a good showing for the Japanese rubber industry. There are 28 advertisements in the number under review, all bearing in some way upon the rubber interest. There are announcements both of manufacturers and importers, some offering rubber goods in general



HEADPIECE OF THE GOMU SHIMPŌ (INDIA RUBBER NEWS), TOKIO, JAPAN.

tion to Rubber" (having reference to planting investments), "The Hongkong Rubber Revolution," and notes on Malaysian and other planting company dividends.

There are articles on two or three Japanese rubber manufacturing companies; statistics of imports at different ports of india-rubber and gutta-percha; the prices of crude rubber, and such like information. One article is headed "Koma Agricultural College and Rubber." Celluloid also receives attention, first in a statistical article, and secondly in a review of the celluloid industry in Germany.

The coming International Rubber Exhibition in London receives attention, and there are articles on the automobile industry in the United States and on the amount of capital invested in the rubber industry in the world. The leading technical article is devoted to "Compounding Rubber." The remaining title is "Pedals for Bicycles."

It will be seen from this brief summary that the editors of *Gomu Shimpō*, in the allotment of their space, have adhered pretty closely to their text. Here we recall that when *THE INDIA RUBBER WORLD* was being founded there were members of the trade who feared that early failure would result from the inability of the editor to find enough matter pertaining to rubber to fill the paper. And the success of the first journal ever published in the trade—*The Rubber Era*, of New York, forty years ago—in getting together matter bearing upon rubber was not

and others confining themselves to specialties. The advertisements relate to mechanical goods, druggists' sundries, tires, toys, shoes, balloons, crude rubber, and substitutes. Particular attention is given to jinriksha tires. Two firms mention waste rubber. There is, in fact, no general class of rubber goods not mentioned in these advertisements, with the exception of waterproof clothing. One of the advertisers, by the way, is the Japanese Ingram Rubber Co., a branch of an important English concern established recently at Kobe, for the manufacture of medical and surgical supplies, including gloves and nipples. We notice an announcement also of the British "Murac."

well filled columns of our excellent contemporary, *Gomu*. With this excellent material in such goodly quantity to start with and the promise of industrial progress that characterizes modern Japan, there seems to be no reason why *Gomu Shimpō* should not attain an importance, a magnitude, and a circulation in keeping with the present condition and future growth of the rubber industry in Japan. That there is room and plenty of opportunity for the industry is attested by the present importance and diversity of Japan's manufacturing interests; also by the steady spread of modern culture among her people. These factors mean an increased demand for rubber goods and a wide field for our esteemed far-eastern contemporary.

Our congratulations to *Gomu Shimpō* and to the trade which it so worthily represents!

The Rubber Trade at Akron, Ohio.

By a Resident Correspondent.

COMPANY MEETINGS.

AT the annual meeting of shareholders of the B. F. Goodrich Co., on January 18, the reports presented showed that the volume of business transacted during 1910 exceeded that for any previous year. The outlook for this year is said to be exceedingly satisfactory. No announcement of additional buildings this year was made, but the company will build extensions to the factory as necessary, as they did during the past year, when several large structures were erected. The directors were reelected George T. Perkins, George W. Crouse, B. G. Work, F. H. Mason, H. E. Raymond, E. C. Shaw and C. C. Goodrich. The board reorganized and elected officers as follows.

President—BERTRAM G. WORK.
First Vice-President—FRANK H. MASON.
Second Vice-President—H. E. RAYMOND.
Secretary and Assistant Treasurer—CHARLES B. RAYMOND.
Treasurer and Assistant Secretary—WILLIAM A. MEANS (succeeding Walter A. Folger).
General Manager of Works—E. C. SHAW.

Arthur P. Lumsden, of Akron, will be general manager of the French works of the Goodrich company, near Paris, which will be put in operation this year for the manufacture of the company's tires for the European market.

The shareholders of the Swinehart Tire and Rubber Co. met on January 16. The statement for the year 1910 shows a very substantial growth, the sales amounting to \$820,000, compared with \$139,000, the actual amount of business done during the previous year. The prospect for 1911 is that a very large increase will be made in the business of the company. The regular quarterly dividend of 2 per cent. was declared. The directors chosen were: W. W. Wuchter, Joseph Dangel, R. A. May, Frank B. Theiss, William A. Byrider, C. O. Baughman, August Blessman, and W. E. Wright. The three last named are new members of the board; James A. Swinehart and Frank R. Talbot retire. The officers elected are:

President and General Manager—W. W. WUCHTER.
Vice-President—JOSEPH DANGEL (succeeding James A. Swinehart).
Secretary—C. O. BAUGHMAN.
Treasurer—R. A. MAY.

The Swinehart company have established new distributing points with The Keaton Vulcanizing Co., San Francisco; The Terminal Taxicab Co., No. 2131 Twentieth street, N. W., Washington, D. C.; and the Empire State General Vehicle Co., Rochester, New York.

The Portage Rubber Co., incorporated under the laws of Ohio, have increased their capital stock from \$10,000 to \$1,000,000. The United Rubber Co., of Barberton, with a reclaiming plant in operation have been merged with the company. The following list of officers comprises also the board of directors:

President—H. C. HAGELBARGER.
Vice-President—HOWARD KENDEL.
Secretary—G. H. DOOLITTLE.
Treasurer—A. S. MOTTINGER.

W. W. Wildman, who was general manager of the United Rubber Co., is now general manager of the Portage company. They intend to engage in the manufacture of rubber goods generally, and to locate a new plant in or about Akron.

The annual meeting of shareholders of the Royal Rubber Co. was held on January 18, when the following directors were chosen: W. M. Blecker, Frank A. Wilcox, James E. Whigham, J. C. Gibson and J. A. H. Myers. The officers elected are:

President—W. M. BLECKER.
Vice-President—FRANK A. WILCOX.
Secretary—J. A. H. MYERS.
Treasurer—J. E. WHIGHAM.
General Manager—J. C. GIBSON.

The Royal company have bought out the Milford Rubber

Works (Milford, Illinois), the equipment of which is to be removed to Akron and added to their plant there. The Royal company are capitalized at \$200,000, and will add solid and pneumatic tires to their production of mechanical goods.

The Federal Waterproofing Co., lately organized at St. Joseph, Missouri, have removed to Akron, and secured factory space from the Goodyear Tire and Rubber Co., which they will occupy until a new building can be erected. The directors are: L. C. Rockhill, G. W. Rogers, H. H. McClosky, H. S. Bryan, and W. S. Hendrick. The officers are:

President—L. C. ROCKHILL.
Vice-President—G. W. ROGERS.
Secretary and Treasurer—H. H. MCCLOSKEY.

Charles C. Measure, for three years past manager of the New York branch of the Goodyear Tire and Rubber Co., has been appointed general manager of the company.

INCREASING BUSINESS.

THE Miller Rubber Co. report an increase in business for the past year of 125 per cent. Their productive capacity was nearly doubled during the year. The latest addition to their plant has been a new press department. Their quarterly dividend of 2½ per cent. was announced on January 10. They have placed on the market a novel non-skid tire, in connection with which Mr. W. F. Pfeiffer, treasurer of the company, attended the automobile shows at New York.

The Alkali Rubber Co. during the year past have doubled their factory, both in size and capacity. They have constructed a three-story mill building of reinforced concrete, 75 x 231 feet; a two-story grinding building of concrete, 55 x 216 feet; a new brick and steel power house, 50 x 180 feet; a concrete converting building, 60 x 150 feet; a two-story concrete boiling building, and an assorting house of concrete, 18 x 240 feet, together with new yards 325 x 120 feet, and crane service. The new power house is equipped with a 1750 H.P. Hamilton-Corliss engine, and generators.

The Buckeye Rubber Co. (the Akron branch of the Consolidated Rubber Tire Co.) have almost trebled their volume of business within a year, having increased their capacity proportionately. They contemplate building this summer a two-story brick addition, 60 x 120 feet.

The Stein Double Cushion Tire Co. report a constant increase of output, to accommodate which they will be compelled to build an addition to their factory this summer.

The Lyons Rubber Co., since their fire, have rebuilt a three-story brick building, 50 x 70 feet. They have added to the manufacture of drug sundries a line of pneumatic tires. O. G. Lyons is general manager, and A. A. Peterson has charge of the tire department.

The Faultless Rubber Co., of Ashland, have nearly completed a large and modern office building which they expect to occupy by March 1.

A FEW NOTES.

JOHN J. MORIARTY, formerly a chemist with the B. F. Goodrich Co., has been appointed factory superintendent by the Goodyear Tire and Rubber Co. of Canada, Limited, at Bowmanville. He recently resigned the position of superintendent of the Pennsylvania Rubber Co. (Jeannette, Pennsylvania), to go to the Canadian factory.

The rubber manufacturers of Akron claim that 65 per cent. of all the cars exhibited at the Madison Square automobile show in New York were equipped with their tires.

THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

AT a recent meeting of the Thermoid Rubber Co., New York, Messrs. Robert J. Stokes and Fred S. Wilson were elected directors of the company at a subsequent directors' meeting, Mr. Stokes was elected secretary and Mr. Wilson vice-president of the company. Both gentlemen are well qualified to be of practical service to the corporation in their respective positions. Mr. Stokes, who is the son of W. J. B. Stokes, who has large rubber interests in Trenton, and who has five uncles prominently identified with the rubber business, spent his summer vacations, as a boy, in one of the plants with which his father was connected, and later, entering Princeton University, took up chemistry as his special study. On graduating, in 1904, he went into the rubber business, taking a practical course that began at the bench. He gradually rose by steady promotion until he attained his present rank as secretary and superintendent of the plant. Mr. Wilson entered the employ of the Messrs. Stokes about seventeen years ago, and after some three years in the mill, went over to the sales force for several years. He has had full charge of the company's automobile goods department and has at different times filled the position of sales manager and advertising manager, the company being notably heavy advertisers. From one of the smallest concerns, the Thermoid Rubber Co. has grown into one of the largest rubber manufacturing corporations in the East, and as to some of its lines enjoys a world-wide reputation. It has branches in New York City, Boston, Philadelphia, Pittsburg, St. Louis, Detroit and San Francisco, and London, England. Its principal lines are mechanical rubber goods, automobile tires, tubes and brake lining. The present officers of the company are as follows:

President—J. O. STOKES.
Vice President—F. S. WILSON.
Treasurer—W. J. B. STOKES.
Secretary—R. J. STOKES.

Charles Y. Flanders, general sales agent of the United and Globe Rubber Manufacturing Co., Trenton, New Jersey, who recently suffered an attack of acute indigestion while riding on a train and was taken to the Mercer Hospital, is now reported to have completely recovered.

George R. Cook, of the Hamilton Rubber Manufacturing Co., is wintering with his family at Court Inn, Camden, South Carolina, at which place they have been for several seasons past. Mr. William H. Service, of the same company, recently left for a vacation which he will spend in Florida.

Karl G. Roebeling, general sales manager of the John A. Roebeling Sons Co., left for a trip to Honolulu the last of January.

Katzenback & Bullock Co., importers of manufacturers' supplies, have opened storehouses from which to make quick deliveries at Trenton, Philadelphia, New York, and Montreal.

General C. Edward Murray and Mr. C. H. Semple, of the Empire Tire Co., will personally attend the Chicago Automobile Show, where the company will have an attractive exhibit.

Watson H. Linburg, president of the United and Globe Rubber Manufacturing Co., recently left for Palm Beach, where he expects to spend some time.

The Leicester Rubber Co. are now occupying their new plant at the foot of Paul and Perrine avenues. This company manufacture door mats, mats for automobiles, and are equipping to make other molded goods and to reclaim.

Whitehead Brothers, Rubber Manufacturing Co. have recently erected a two-story brick office building on the site of the old Whitehead homestead. The new offices are handsomely appointed and equipped with every convenience.

A BOOK for rubber planters—Mr. Pearson's "What I Saw in the Tropics."

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE Gorham-Revere Rubber Co. is a new California corporation recently organized to take over the business of the Gorham Rubber Co., of San Francisco, and that of the Revere Rubber Co. on the Pacific coast. The headquarters will be in San Francisco, and in each city on the coast in which these separate firms have had branches the business is to be conducted in future under one roof. The list includes Seattle and Spokane, Washington; Portland, Oregon; and Los Angeles and Oakland, California. The officers are

President—William J. Gorham.
Vice President—Charles C. Case.
Treasurer—W. R. Pierce.
Secretary and Assistant Treasurer—W. B. Heckmann.

The president of the new company was the founder, fifteen years ago, of the business which has grown into the Gorham Rubber Co., of which he has been president. The treasurer, Mr. Pierce, has been the manager of the local branch of the Revere Rubber Co. Mr. Case, the vice president, is the vice president of the Revere Rubber Co., a Rhode Island corporation, and Mr. W. B. Heckman, secretary and assistant treasurer, was the secretary of the Gorham Rubber Co. prior to the amalgamation.

The year has opened up favorably with the rubber houses, the principal feature of the opening days having been a good long rain, which was general throughout the entire state. Prior to that, for many weeks, there had not been a drop of rain. It is said to have been the longest period at that time of the year without rain that has been known here, and the fall business was unquestionably interfered with. Fortunately the dry spell did not continue for a period long enough to interfere with the crops of the coming season. The rains have allayed the fears of the farmers, and have restored confidence to those who feared a dry season. The storms have also helped the retailers to dispose of goods which they had feared they might have to carry over to another year.

The B. F. Goodrich Co. has opened its store at No. 341-347 Market street. The company has also established quarters at No. 556-560 Golden Gate avenue, which store they propose to devote to the handling of local automobile trade. It is under the management of Mr. A. W. Ralph.

Electric Hose & Rubber Co., which has been represented for the past two years by Mr. F. C. Anderson, who conducted business under his own name, has moved to No. 562 Howard street, and will hereafter operate under the name of the company, of which Mr. F. C. Anderson will continue the management. The former location was at No. 422 Mission street.

The Association of the Rubber Merchants of San Francisco held its regular monthly banquet last week at the Palace Hotel. An elaborate menu was enjoyed, and the meeting was presided over by Mr. W. R. Pierce.

The Gutta Percha & Rubber Manufacturing Co. will soon occupy its new quarters on Fremont street.

The George A. Sheehan Co., Coast representatives of the Davol Rubber Co., of Providence, R. I., report that last year's business shows a substantial increase over that of the year preceding. This company has recently taken the agency of the Hygeia nursing bottle, manufactured in Buffalo, which has proved to be a popular account.

A LAW SUIT OVER PROFITS FROM an artificial rubber scheme is reported from Boston. Why doesn't the plaintiff save himself trouble by producing enough artificial money to supply all his wants?

THERE MUST BE MORE INVOLVED in rubber planting in Ceylon than is dreamed of in the philosophy of the Western world. Else how could one find in a matter of fact newspaper a mention of a "Kanakapulle" sleeping inside a rubber factory at Gampola?

THE OBITUARY RECORD.

JOSEPH T. HART.

JOSEPH THOMAS HART died on December 28 at the Lakewood Hospital, in Cleveland, Ohio, a few days after undergoing an operation for a malady from which he had suffered for about two years, though it had not prevented his attention to his duties as superintendent of the footwear department of The Diamond Rubber Co. (Akron, Ohio).

Mr. Hart was born in Liverpool, England, October 18, 1869, being the son of George Hart, who was connected with the rubber industry there, and who came to America with his family three years later. George Hart, after being connected with the Good-year Glove company at Naugatuck, became factory superintendent of the Lycoming Rubber Co., at Williamsport, Pennsylvania, where he still resides.



JOSEPH THOMAS HART.

Joseph T. Hart began his work in rubber at the age of 16, under his father, at the Lycoming factory, in which he achieved such efficiency as to enable him to accept the position of superintendent of the boot and shoe department of the Canadian Rubber Co. of Montreal. Afterward he went into the last business at Granby, Quebec, and then was factory superintendent of the Merchants Rubber Co. at Berlin, Ontario. Three years ago he became general manager of the La Crosse Rubber Mills Co. (La Crosse, Wisconsin), which position he left in August, 1909, to organize the footwear department of The Diamond Rubber Co. Mr. Hart was an able and practical footwear manufacturer and had many friends in the trade.

Mr. Hart married Miss Margaret Annie Stewart, June 24, 1903, while living in Montreal, who survives together with a son, by his first wife. His remains were interred at Williamsport.

PAUL MORTON.

PAUL MORTON died suddenly in New York on January 19, in his fifty-fourth year. He was the son of a Cabinet minister, and himself became secretary of the navy of the United States after a brilliant career as a railroad president. At his death he was president of the Equitable Life Assurance Society, of New York, which position he had filled for more than five years. He was a director of the Intercontinental Rubber Co., and chairman of the executive committee.

THEODORE J. ACKERMAN.

Theodore J. Ackerman, formerly engaged in business as a manufacturer of rubber goods, died at his home in New Haven, Connecticut, on January 8, after a brief illness, in the ninetieth

year of his age. One of New Haven's oldest residents, the son of Jonathan C. Ackerman, one of the original directors of the Pennsylvania Railroad, deceased, was born in New Brunswick, New Jersey, and settled in New Haven in 1872; with his brother, Warren Ackerman, he was engaged in the drug business in New York at the time of the Civil War, when his brother obtained a patent on a rubber blanket that came into extensive use with the soldiers in the field. Three factories were kept busy supplying the demand for them, and of one of these, located at Naugatuck, Connecticut, the deceased had charge. After the war the demand for the blankets ceased, and Mr. Ackerman engaged in other business, from which for several years before his death he had retired. A widow and daughter survive him.

ROBERT WINDER JOHNSON.

Robert Winder Johnson, senior member of the long-established Philadelphia firm of Laurence Johnson & Co., who have figured in an important way in the crude rubber trade, died on December 28. The business will be continued under the same style by Antonio Sans, Lawrence J. Morris, Russell H. Johnson, Lawrence Johnson, Jr., all surviving members of the former firm, and Morris Winder Johnson.

CHARLES F. BAKER.

It is with regret that we have learned, just prior to going to press, of the death of Charles F. Baker, of the Baker Rubber Cement Co., Incorporated, of 50 Lincoln street, Boston. The deceased was recognized as a man of many sterling qualities, who enjoyed the confidence and respect of all who knew him.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of the values of exports of manufactures of india-rubber and gutta-percha for the month of November, 1910, and for the first eleven months of five calendar years:

MONTHS.	Belting, Packing and hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
November, 1910	\$159,021	\$187,055	\$506,407	\$852,483
January-October	1,759,590	1,906,961	4,687,399	8,353,950
Total, 1910.....	\$1,918,611	\$2,094,016	\$5,193,806	\$9,206,433
Total, 1909.....	1,637,018	1,474,559	3,978,186	7,089,763
Total, 1908.....	1,131,272	1,224,799	3,255,507	5,611,578
Total, 1907.....	1,294,460	1,532,595	3,643,744	6,470,799
Total, 1906.....	1,083,228	1,137,445	2,993,804	5,214,477

The above heading "All Other Rubber," for the last five months includes the following details relating to Tires:

MONTHS.	For Automobiles.	All Other.	TOTAL.
July .....values	\$146,080	\$56,096	\$202,176
August	151,468	71,486	222,954
September	133,735	39,457	173,192
October	103,788	33,469	137,257
November	160,214	37,962	198,176

FOLLOWING THE EXAMPLE OF MANY other large cities throughout the country in adopting self-propelled apparatus for extinguishing fires, the New York fire department will have to be reckoned with in the future as a factor in the rubber market. Rubber tires, of special make and size, will be required for its ponderous vehicles, while at the speed with which they travel over pavements not always of the best, which with the possibilities of the automobile will be greatly accelerated—the pneumatic tires will be subject to tremendous stress and wear. Taken together with the rubber that enters into the rubber lined hose, the department uses in such large quantities, it will readily be seen that the protection of New York from the fire fiend is going to help boom the price of this commodity, the supply of which is short enough as it is.

News of the American Rubber Trade.

THE NEW REVERE RUBBER COMPANY.

THE \$4,000,000 corporation which has just been formed under the laws of Rhode Island, under the name Revere Rubber Co., has for its purpose the taking over of the business of the long established Massachusetts corporation of the same name. It is a step toward the closer consolidation of the old company with the United States Rubber Co., which acquired control of it in January, 1910, by paying \$4,000,000 for the capital stock of the Revere—\$2,000,000 at par. Elisha S. Williams, general manager of the Revere company, was at once elected president of the Rubber Goods Manufacturing Co., a subsidiary of the United States company, and several members of the board of the latter were elected directors of the Revere company.

The next important announcement in this connection was that the plant of the Joseph Banigan Rubber Co., at Olneyville, Rhode Island—also owned by the United States Rubber Co., but not at the time in operation—was being put into shape for taking care of an important part of the production of the Revere Rubber Co. The Olneyville factory has also been considerably enlarged.

Following the incorporation of the Revere Rubber Co. in Rhode Island, on December 19, a temporary organization was effected. A few days later the following were elected directors: Elisha S. Williams, Charles C. Case, William H. Gleason, Samuel P. Colt, James B. Ford, Harry E. Converse, and Homer E. Sawyer. The officers elected are:

President—ELISHA S. WILLIAMS.
Vice President—CHARLES C. CASE.
Treasurer and Secretary—WILLIAM H. GLEASON.
Assistant Treasurer and Assistant Secretary—JOHN D. CARBERRY.

BISHOP GUTTA-PERCHA CO.—ANNUAL.

At the annual meeting of the shareholders of the Bishop Gutta-Percha Co., held at the office of the company in New York on January 18, the following directors were elected: Henry A. Reed, W. Boardman Reed, Henry D. Reed, Louis F. Reed, and E. I. Anderson. The board then reelected the officers, as follows:

President—HENRY A. REED.
Vice President—HENRY D. REED.
Treasurer—W. BOARDMAN REED.
Secretary—LOUIS F. REED.

MARION INSULATED WIRE AND CABLE CO.—ANNUAL.

At the annual meeting of the Marion Insulated Wire and Rubber Co., held at their main office at Marion, Indiana, on January 17, the following directors were elected: J. L. Barley, Robert J. Spencer, John Prior, L. C. Lillard, C. E. Van Vactor, M. F. Cartland and R. E. Lucas. The board then elected officers as follows:

President—J. L. BARLEY.
Vice President—ROBERT J. SPENCER.
Treasurer—HIRAM BESHORE.
Secretary and General Manager—R. E. LUCAS.

Plans were adopted by the board for an additional building 66 x 50 feet, three stories and basement, to be used for the shipping and braiding departments.

RUBBER MANUFACTURERS MUTUAL INSURANCE CO.—ANNUAL.

The annual statement of the Rubber Manufacturers' Mutual Insurance Co. (Boston, Mass.), covering the year ending December 31, 1910, shows that the company had at risk on that date \$53,862,581. The company's total income during the year amounted to \$483,061.96, of which \$465,229.69 was received in the shape of premiums. Including \$2,760.37 paid for sprinkler leakage losses, the company paid in losses during the twelve months, \$23,162.29, and returned in deposit premiums to policyholders \$389,325.45, equivalent to an average of 88 per cent., as compared with 85 per cent. returned for the year 1909. The company's assets, at the close of the year, amounted to \$445,048.58, the total liabilities including unadjusted losses and unearned pre-

miums on outstanding risks, were \$242,102.23, leaving a surplus of \$222,946.35. The cash assets of the company available for the payment of losses amounted to \$455,437.79; the company's assessment liability to \$2,324,914.40. The company has for directors Arthur H. Lowe, Fitchburg, Mass.; E. B. Page, Winchester, Mass.; George H. Hood, Boston, Mass.; Marcus Beebe, Malden, Mass.; Robert Batcheller, Boston, Mass.; C. C. Converse, Boston, Mass.; E. H. Clapp, Boston, Mass.; F. W. Pitcher, Easthampton, Mass.; W. B. Plunkett, Adams, Mass.; C. E. Stevens, Ware, Mass.; E. S. Williams, New York, N. Y.; George B. Hodgman, New York; C. T. Plunkett, Adams, Mass.; B. G. Work, Akron, Ohio, and Benjamin Taft, Ayer Mass. The company's officers are:

President—ARTHUR H. LOWE.
Vice President—E. B. PAGE.
Secretary and Treasurer—BENJAMIN TAFT.
Assist. Secretary and Assist. Treasurer—W. B. BROPHY.

HODGMAN RUBBER CO.—ANNUAL.

At the annual meeting of the Hodgman Rubber Company, New York, held on January 19, the following directors were elected: G. B. Hodgman, S. T. Hodgman, F. A. Hodgman, N. E. Stout and A. W. Warren. The officers elected were as follows:

President—G. B. HODGMAN.
Vice President—F. A. HODGMAN.
Treasurer—S. T. HODGMAN.
Secretary—A. W. WARREN.

L. AND M. RUBBER CO.—ANNUAL.

The L. & M. Rubber Co. (Carrollton, Ohio) have changed their name to the Miller Tire and Rubber Co. They will continue the manufacture of druggists' sundries, and are taking on automobile tires and tubes. The officers are:

President and Treasurer—A. E. BUTLER, of Chicago.
Vice President—D. S. HARDING, of Chicago.
Secretary—J. H. RICHARDS, of Carrollton.
Manager—A. J. RICHARDS, of Carrollton.
Superintendent—L. MILLER, of Carrollton.

THE REPUBLIC RUBBER CO.—ANNUAL.

The seventh annual meeting of the Republic Rubber Co. (Youngstown, Ohio) was held on January 23. The officers were reelected, as follows:

Chairman of Board of Directors—THOMAS L. ROBINSON.
President—J. F. MCGUIRE.
Vice Presidents—L. J. LOMASNEY and L. T. PETERSON.
Treasurer—M. I. ARMS, 2.
Secretary—C. F. GARRISON.

The new building for the manufacture of balata belting by the Republic company is now practically completed, and they will put on the market, within the next few weeks, "Lanco" balata belts of their own make.

RUBBER AND CELLULOID HARNESS TRIMMING CO.—ANNUAL.

At the annual meeting of the Rubber and Celluloid Harness Trimming Co., Newark, N. J., held on January 10, directors were elected, as follows: Andrew Albright, Jr., E. A. Spurr, Mathew Dunlap, David Lockwood, Thomas Kays and Edward G. Robertson. The company reports a prosperous year's business, in spite of a disastrous fire in September last. Officers were elected by the board as follows:

President—ANDREW ALLRIGHT, JR.
Vice President—E. A. SPURR.
Secretary—THOMAS KAYS.
Treasurer—EDWARD G. ROBERTSON.

MULCONROY EMPLOYEES ENTERTAINED.

An enjoyable banquet was given on December 29 by Mulconroy Company, Inc., dealers in rubber goods (Philadelphia), at Kuglers in that city, to their numerous employees, in recognition of their loyalty and fidelity, Mr. James J. Mulconroy, president of the company, presiding. An elaborate menu card had been prepared as a souvenir of the occasion, and to each member of the party there was handed, at the close of the repast, a surprise package. Each package was found to contain a lemon; but the largest and juiciest was in the package that was handed

to Mr. Mulconroy. Beautiful floral decorations and tuneful music added to the enjoyable character of the gathering. Among those present were: James J. Mulconroy, president; George J. Holden, secretary; Edwin S. Morris, treasurer; Howard R. Peterman, salesman; S. E. Lineweaver, salesman; Fred R. Mackrell, shipper; Hugh K. Anderson, factory foreman.

REPUBLIC COMPANY TO MAKE BALATA BELTING.

FOR some time past the Republic Rubber Co., of Youngstown, O., have been selling, in increasing quantities in the United States, Lanco Genuine Balata Belting, manufactured by an English concern, and for which, in spite of the heavy duty imposed on it under the United States tariff, they found a large sale, owing to its adaptability to American methods of operation and climatic conditions. Lanco Genuine Balata Belting, is said to be the strongest in existence, the makers claiming for it a tensile breaking strain of 9,000 pounds per square inch, which, with its water-proof, durable and non-stretching properties, adapt it particularly for severe conditions of service.

By virtue of associations entered into with the English manufacturers, some time ago, the Republic Rubber Co. have arranged with them for the installation, in this country, of a plant for the manufacture of this belting and the establishment, which has been built and equipped, under the direct supervision of the English company, is now completed and in operation.

Furnished with machinery, etc., of the most modern character and thoroughly up-to-date devices for handling a large output; the factory will be able to turn out belting to the value of more than \$1,000,000 per annum, while suitable storage space will be provided for upwards of 2,000,000 feet of the finished article. The balata belting made at Youngstown will be of the highest standard quality and made under the secret impregnation process which is the exclusive property of the English company, and the sole right to which, in the United States and Mexico, with other protected processes, the trade marks, copyrights, etc., of the English company, the Republic Rubber Co. have required.

Lanco Balata Belting is already handled in the United States by a large number of jobbers, and the Republic Rubber Co. will push its sale actively, under the management of Mr. W. R. Goudie, who comes from England to take charge of the selling arrangements. It may be added that the reduction in price, made possible by the saving of the tariff, will enable the manufacturers to sell Lanco Belting at about the price of high-grade rubber belting, and very much cheaper than leather belting, so that it should eventually find extensive sale in the United States.

THE VOORHEES "OLD GUARD."

IN these days of conflict between employer and employes, when the press is full of accounts of strikes with and without cause, it is rather refreshing to find a case where the relations between the worker and the employer have continued amicable for a quarter of a century.

Every one in the rubber trade recognizes in John J. Voorhees, the president of the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey) one of the pioneers in the mechanical rubber goods industry, but not every one knows of the veterans he has with him—men who have been associated with him for the greater part of his business life.

The Voorhees company have a goodly number of men with terms of service of over ten years, but the record of this "Old Guard," as it is appropriately termed, is phenomenal.

It would seem unquestionable that in a business that is so complicated, so troublesome in detail as is the manufacture of rubber goods, the experience of a body of intelligent men such as these, must count for much, and prove a valuable adjunct to the concern where they are employed.

The illustration which accompanies this article shows eleven

men who have been actively engaged in the rubber business with Mr. Voorhees for an aggregate of 283 years, or an average for each man for 25 7/11 years. Their terms of service range from 21 to 31 years. These men are now heads of departments, engineers, master mechanics—in a word, the supervising force of a well regulated factory.

The names of the men and positions they occupy in the works, beginning at the left of the top line, are as follows: Ernest Converse, in charge of shipping department; Warren W. Ainsworth, master mechanic; (The Old Man), Dennis Mulqueaney, mill



man; Albert L. Wilson, shipping department; Charles Eichman, foreman belt department; Louis B. Pugsley, chief engineer; Edward Walsh, foreman hose department; Nicholas Weismann, foreman sundry department. Front row, left to right: Edwin J. Jones, foreman mill rooms; John Eisman, dean of calender men; Albert Eggs, head platen man.

THE "OLD GUARD"

We, the undersigned, have been actively engaged in the rubber manufacturing business with Mr. John J. Voorhees, for the terms of service set opposite our respective names.

NAME OF VETERAN	TERM OF SERVICE
Warren W. Ainsworth	25 YEARS
Ernest W. Converse	25 "
Albert Eggs	22 "
Charles Eichman	22 "
John Eisman	30 "
Edwin J. Jones	25 "
Dennis Mulqueaney	31 "
Louis B. Pugsley	29 "
Edward Walsh	29 "
Nicholas Weismann	21 "
Albert L. Wilson	28 "
Total Years, 283	
Average Term of Service 25 7/11 Years	

OWNERS OF THE UNITED STATES RUBBER CO.

THE number of shareholders in the United States Rubber Co., on October 31, 1910—having reference to all classes of the company's issues, was 8,248, against 6,464 one year previously, according to a table compiled by the *New York Journal of Commerce*. The total capitalization of the company being now \$75,000,000, the average holdings work out at \$9,100 per capita.

The broad conclusion prompted by the records kept by the *Journal* for a series of years is that the capital of our large corporations is gradually being absorbed by citizens not usually classed as capitalists. More and more the savings of the public are being invested in corporate securities.

CHANGE OF SUPERINTENDENTS AT READING.

HUGH A. NEWELL has retired from the position of superintendent of the Reading Rubber Manufacturing Co. (Reading, Massachusetts), after having given 21 years to the up-building of the company's business, and an annuity has been settled upon him by the company. On the afternoon of December 31 Mr. Newell was surprised by being called into the shipping room of the factory, where he found a large number of the employees assembled, and where he was greeted with a speech expressing their appreciation of him, followed by the presentation of a gold headed cane. Mr. John Hope, well, president of the company, had come out from Boston to be present at this little ceremony, and made a speech testifying to the merit of the retiring superintendent, and asking that the force show to the new superintendent the same loyalty that they had manifested toward the old. Mr. Newell is succeeded by Everett A. Skinner, who has had charge of the shipping department for 20 years, his duties gradually embracing other details as the business developed, until he has become conversant with the work of all departments.

FIRE HOSE FOR NEW YORK CITY.

THE fire hose mentioned in the New York newspapers at the beginning of the year as having been purchased for the city—60,000 feet, from The B. F. Goodrich Co. of New York—was the same that had been reported earlier [see *I R W* October 1, 1910, page 31], the later report having resulted from the completion of the contract.

MR. RICE GOES TO PORT DALHOUSIE.

JOSEPH M. RICE has resigned as superintendent of the boot and shoe department of the Apsley Rubber Co. (Hudson, Massachusetts), after having filled the place since the creation of this department, some eleven years ago. Mr. Rice had previously

been at the plant of the National India Rubber Co. He has now gone to Canada as factory superintendent of The Maple Leaf Rubber Co., Limited, at Port Dalhousie. Mr. Rice owns a home at Hudson, where his family will remain for the present.

NEW WATERPROOF CLOTHING COMPANY.

THE London Waterproof Co., of No. 55 East Eleventh street, New York, the incorporation of which has been mentioned [see *I R W* January 1, 1911, page 137] has been organized for the manufacture of a popular price line of men's and women's waterproof clothing, with offices and salesroom at the address above given, and a factory in Manchester, England. The company is composed of Louis Wener, who has been identified with the rubberproofing business for 15 years past, and Julius Roggen and Sol. Roggen.

CHANGE AT HARMER RUBBER RECLAIMING WORKS.

THE interest in Harmer Rubber Reclaiming Works (East Millstone, New Jersey) owned by H. A. Rosenthal and J. Gordon has been purchased by A. Marcus and I. Laurie, who were already connected with the corporation. The business is now controlled by the two gentlemen last named and Thomas W. Harmer. At the annual election on January 10, 1911, Thomas W. Harmer was reelected president and A. Marcus secretary and treasurer. I. Laurie was elected vice-president. The Harmer Rubber Reclaiming Works have been making constant headway since first beginning business and during most of the time have found night work necessary. Lately they have put in two additional mills, enabling them to greatly increase their output. They are making special grades of reclaimed rubber for mechanical goods and

insulated wire. They are making white and red grades, to which they call special attention.

THE SHOE TRADE AT LYNCHBURG.

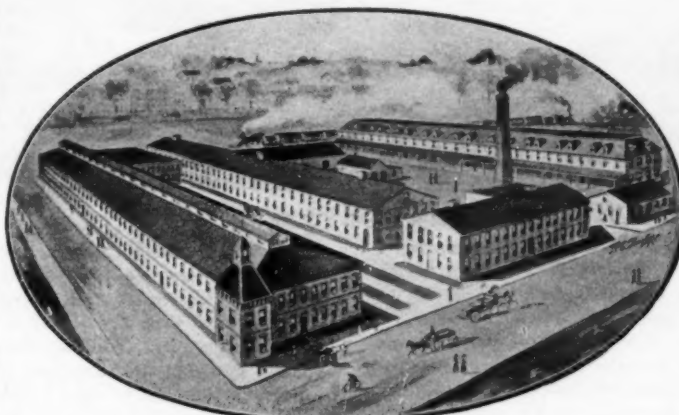
THE merger of the two large shoe manufacturing firms at Lynchburg, Virginia [see *I R W*, December 1, 1910, page 99] went into effect at the beginning of the year. In connection with acquiring control of the George D. Witt Shoe Co., the Craddock-Terry Co., have increased their capital to \$1,500,000. The factories of the George D. Witt Co. will continue to be operated under the old name; T. M. Terry is the new president of this company, succeeding Mr. Witt.

HEADQUARTERS OF A RUBBER COMPANY.

THE general offices of the United States Rubber Co. (No. 42 Broadway, New York) are located in one of the largest buildings in the world. It is 21 stories high, with a frontage of

FACTORIES OF THE APSLEY RUBBER CO.

THE ORIGINAL PLANT, TWENTY-FIVE YEARS AGO.



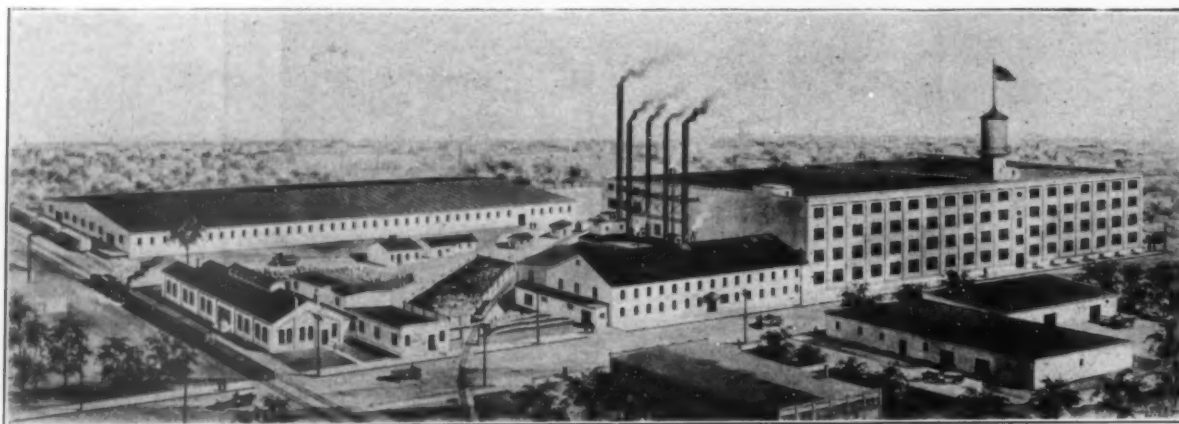
THE PLANT AS IT APPEARS TO-DAY.

115 ft., embraces 12½ acres of office floor area, and has an estimated population of 5,000 workers. This building changed owners during the past month, the consideration being reported at \$7,500,000.

FIRESTONE ERECTS LARGE RIM PLANT.

THE Firestone Tire & Rubber Co. has recently gone into rim manufacture on an extensive scale, according to the announcement of Mr. H. S. Firestone, president of the Firestone Tire & Rubber Co. The new plant, which is said to be elaborately equipped, is now in operation and making all kinds of automobile, motor truck, and carriage tire rims. It is claimed that the advent of this new Firestone industry will result in a radical saving in the cost of wheel equipment.

The new rim plant, of which the accompanying picture is an excellent reproduction, adjoins the present tire factory and is equipped with the latest types of machines for rolling, shaping, electric welding, galvanizing, and so forth. It is further proposed that on the completion of the new Firestone tire plant, now in process of erection, the present tire factory building shall be equipped with additional rim machinery, thus giving the Firestone Co. an exceedingly large rim producing capacity.



NEW FIRESTONE RIM PLANT.

THE UNITED STATES TIRE CO.—A NEW CONSOLIDATION.

THE incorporation of the United States Tire Co., under the laws of New York, with a nominal capital of \$500,000, marks the first step toward a reorganization of four important rubber tire companies—The Hartford Rubber Works Co., Morgan & Wright, The G & J Tire Co., and the Continental Caoutchouc Co.—all of which are constituents of the Rubber Goods Manufacturing Co., which in turn is a branch of the United States Rubber Co.

Although members of the same family, the four tire companies named have not been conducted as such in some of their details, and it is to rectify the inconvenience which sometimes resulted from this state of affairs that the United States Tire Co. has been formed. It will take over the head sales department and branch stores of the four companies, and henceforth conduct them as one, and generally keep the family relation close and harmonious.

Elisha S. Williams, president of the Rubber Goods Co., is president of the United States Tire Co., and Charles J. Butler, president of Morgan & Wright, is vice president. Joseph M. Gilbert, general manager of the Continental Caoutchouc Co., becomes general manager of the United States Tire Co., and Justus D. Anderson, president of The Hartford Rubber Works Co., the general sales manager.

Instead of the four separate sales departments that now exist, the country will be divided into three districts, each in charge of a manager. The Eastern district, with offices in New York, will be in charge of O. S. Tweedy, now sales manager of the

Continental company; the Central district, with offices in Chicago, will be in charge of A. I. Philp, now vice president and sales manager of Morgan & Wright; the Pacific Coast district, with offices in San Francisco, will be in charge of Joseph Western, secretary of Morgan & Wright. The general headquarters of the United States Tire Co. will be in New York.

The four manufacturing companies will retain their respective corporate existence, and their officials will not be disturbed, but henceforth everything relating to the purchase or sale of their tires will be conducted through the new organization. As fully three-fourths of the 1911 business already has been written, however, the full effects of the new arrangement will not become apparent until next fall. One of the most immediate steps will be the concentration of the various branch stores which now are separately maintained. Each of these consolidated branches will carry tires made by the four factories concerned. None of the four brands will be sacrificed or pushed to the disadvantage of the other.

Concerning the proposed plans, J. M. Gilbert said: "The reorganization and concentration is a perfectly logical step and is in line with the best business thought, and, in fact, with the

spirit of the times. There has been no secret about the ownership of the four companies. From the beginning they have been known as members of the Rubber Goods Manufacturing Co., and it is illogical that they should continue to be rivals and pull against each other. While lessening selling expenses is the chief reason for the new arrangement, there will be no change in the quality of the various tires. Although controlled by the same interests, the companies have always done business as competitors and engaged in keen commercial warfare with each other as if there were no existing family tie. The parent corporation naturally suffered from these methods, and it is to rectify them that the new company has been formed."

TRADE NEWS NOTES.

W. T. RAWLINGS, who had been with the Chicago Rubber Co. since its formation, has associated himself with the Ohio Rubber Co., at Cleveland, where he assumed his new duties on January 3. At a meeting of his fellow employes and friends in Chicago a fine gold watch and chain were presented him as a token of their high esteem, and many regrets were expressed on account of his change of location. The Ohio Rubber Co. have become active in the rubber footwear line, and Mr. Rawlings has had much experience with such goods.

The Goodyear's India Rubber Glove Manufacturing Co. are bringing out an elaborate catalogue of druggists' sundries, the work of Mr. Anton Eggers, superintendent of this department.

Work was resumed on January 3 at the factory of the Apsley Rubber Co. (Hudson, Massachusetts) after a two weeks' rest.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks ending January 21:

COMMON STOCK, \$25,000,000.

[The treasury of a subsidiary company holds \$1,334,000.]

Last Dividend, April 30, 1900—1%.

Week December 24	Sales 1,400 shares	High 34½	Low 33
Week December 31	Sales 8,600 shares	High 38	Low 33½
Week January 7	Sales 1,100 shares	High 37½	Low 36
Week January 14	Sales 5,100 shares	High 37¾	Low 36½
Week January 21	Sales 1,600 shares	High 37½	Low 36½

For the year—High, 37¾, Jan. 14; Low, 36, Jan. 6.

Last year—High, 52½; Low, 27.

FIRST PREFERRED STOCK, \$39,824,400.

Last Dividend, January 31, 1911—2%.

Week December 24	Sales 409 shares	High 109¾	Low 109
Week December 31	Sales 2,714 shares	High 111	Low 109½
Week January 7	Sales 670 shares	High 111½	Low 111
Week January 14	Sales 1,325 shares	High 111½	Low 111
Week January 21	Sales 940 shares	High 110½	Low 109½

For the year—High, 111½, Jan. 14; Low, 109½, Jan. 18.

Last year—High, 116½; Low, 99.

SECOND PREFERRED STOCK, \$9,965,000.

Last Dividend, January 31, 1911—1½%.

Week December 24	Sales 400 shares	High 71½	Low 70½
Week December 31	Sales 400 shares	High 74	Low 73
Week January 7	Sales — shares	High —	Low —
Week January 14	Sales 200 shares	High 74	Low 73¾
Week January 21	Sales 100 shares	High 73	Low 73

For the year—High, 74, Jan. 14; Low, 73, Jan. 21.

Last year—High, 84; Low, 59½.

SIX PER CENT. TRUST GOLD BONDS, \$19,000,000.

Outstanding of the 1908 issue of \$20,000,000.

Week December 24	Sales 34 bonds	High 102½	Low 102½
Week December 31	Sales 29 bonds	High 103½	Low 103¾
Week January 7	Sales 104 bonds	High 103½	Low 103
Week January 14	Sales 73 bonds	High 103½	Low 103½
Week January 21	Sales 56 bonds	High 103½	Low 103½

For the year—High, 103½, Jan. 14; Low, 103, Jan. 7.

Last year—High, 104½; Low, 101¾.

COMMON STOCK.

	1905.	1906.	1907.	1908.	1909.	1910.
Shares sold	723,665	607,800	175,277	191,200	517,411	239,666
Highest price	58½	59½	52½	37½	57½	52½
Lowest price	33¾	38	13½	17½	27	27

Highest 1910, Jan. 3; Lowest, July 26; Closing 37.

FIRST PREFERRED STOCK.

	1905.	1906.	1907.	1908.	1909.	1910.
Shares sold	200,497	123,760	120,108	94,400	199,512	91,849
Highest price	118½	115	109¾	108	123½	116½
Lowest price	98¾	104¾	61½	76	98	99

Highest 1910, Jan. 10; Lowest July 26; Closing 110½.

SECOND PREFERRED STOCK.

	1905.	1906.	1907.	1908.	1909.	1910.
Shares sold	21,550	59,845	31,203	21,131	61,790	19,406
Highest price	83¾	87½	78½	75½	89½	84
Lowest price	75	75	39	42	67½	59½

Highest 1910, Jan. 3; Lowest July 27; Closing 73.

SIX PER CENT. TRUST GOLD BONDS.

	1910.
Bonds sold	3,631
Highest price (January 3)	104½
Lowest price (July 27)	101¾

The board of directors of the United States Rubber Co., on January 5, declared from the net profits the regular quarterly dividends of 2 per cent. on the First preferred stock, and of 1½ per cent. on the Second preferred stock, to holders of record at the close of business on January 16, payable without closing of the transfer books on January 31.

NEW INCORPORATIONS.

REVERE Rubber Co., December 19, 1910, under the laws of Rhode Island; capital, \$4,000,000. Incorporators: Walter S. Ballou, Cumberland; Clarence H. Guild, Providence; and James Harris, Smithfield—all of Rhode Island. Further details appear in another column.

Endurance Tire and Rubber Co., December 16, 1910, under the laws of New Jersey; capital \$100,000. The object is to manufacture automobile tires and tubes, besides making a specialty of rubber bands and later a full line of molded goods. Clement E. Eckrode is president and general manager; George G. Russell,

secretary and treasurer; and James W. Devine, superintendent. The factory is at New Brunswick, New Jersey.

O'Sullivan Rubber Co., December 16, 1910, under the laws of Delaware; authorized capital, \$1,600,000. Incorporators: Joseph A. Bennett, Brooklyn, New York; Harry W. Davis, Wilmington, Delaware; Perley H. Noyes, Tenaflly, New Jersey; Graham Foster, No. 532 West One Hundred and Fifty-fourth street, and Renwick F. H. Macdonald, No. 1052 College avenue—both of New York. This corporation is formed in connection with the sale of the business of the O'Sullivan Rubber Co. (Lowell, Massachusetts), the rubber heel concern, incorporated in Maine in 1899. [See I R W January 1, 1911, page 138.]

Western Compound Rubber Co., December 9, 1910, under the laws of Ohio; capital, \$100,000. Incorporators: Henry W. Jones, John E. Pitts, Harry F. Taylor, Robert T. Jones, and J. Albert Manss. Office located at No. 709 Sycamore street, Cincinnati, Ohio. H. W. Jones, manager, advises THE INDIA RUBBER WORLD that the company purpose building a factory in Cincinnati for making a mineral rubber compound for automobile tires, having been convinced by experiments of the wearing qualities of this material. It is pointed out that this is not to be offered as a cheap product, a wholesale price of \$1 a pound being mentioned.

Endurance Tire Co., December 17, 1910, under the laws of Michigan; authorized capital, \$150,000; paid in, \$100,000. Incorporators: George D. Reid, Arthur H. Britton, and Clair Hodgson—all of Toronto, Canada. The company will produce a solid rubber tire invented by H. H. Hodgson, which is formed of rubber sections held by a steel case, a hoop of steel supporting the tire, with an air space between the hoop and the rim. The new tire is described as being "more resilient than air."

Safety Tire Co., December 7, 1910, under the laws of New York; capital, \$50,000. Incorporators: Reginald H. Schenck, No. 275 Central Park West; Walter E. Holloway, No. 249 West One Hundred and Twenty-third street—both of New York—and Orville R. Van Vechten, Tompkinsville, N. Y.

American Tire and Rubber Co., December 30, 1910, under the laws of Illinois; capital, \$10,000. Incorporators: George W. Stephens, William A. Conover, and Spencer Ward. Principal office: No. 1229 Michigan avenue, Chicago. This company was incorporated originally under the Illinois laws May 12, 1910, as the Factory Auto Supply Co. The corporate title was changed under the date first given by the filing of a certificate with the secretary of state at Springfield.

Puritan Rubber Co., December 21, 1910, under the laws of Maine; capital, \$1,000,000. Incorporators: Thomas McAuliffe and Edward J. Young, both of Boston, and C. L. Andrews, Augusta, Maine.

Montague Rubber Co., December 5, 1910, under the laws of Virginia; capital, \$40,000 maximum and \$10,000 minimum. Incorporators: J. W. Montague (president), John Gill Buck (vice-president and general manager), and C. M. Crusier (secretary and treasurer)—all of Norfolk, Va.

Hentschel-Kemter Tire Co., January 7, 1911, under the laws of New Jersey; authorized capital, \$100,000. Incorporators: Paul M. Kemter, West New York, New Jersey; Arthur W. Hentschel, Union Hill, New Jersey; and Cuthbert I. Gillespie, Montgomery, New York.

Hoelt & Co., Inc., January 5, 1911, under the laws of Illinois; capital, \$20,000; to deal in tires and rubber goods. Incorporators: Charles O. Rundahl, Earl O. Immel, and Lester L. Falk. Location of business office: Nos. 141-3 West Michigan street, Chicago.

Rubber Production Co., December 20, 1910, under the laws of Delaware; authorized capital, \$3,000,000. Incorporators: David C. Munsen, John G. Clark—both of No. 34 Nassau street, New York, and James M. Satterfield, Dover, Delaware.

The Empire Tire Co., a New Jersey corporation, having an authorized capital of \$500,000, was admitted to carry on business in Michigan under the corporation laws of that state on December 16, 1910, the Michigan office being at Detroit.

Review of the Crude Rubber Market.

THE present condition of the crude rubber market is weak and vacillating. Prices since our last report have generally receded, and the whole situation lacks tone. Manufacturers are buying only for the satisfaction of immediate necessity and show very little interest in the market.

At the close of January there was a short advance in the price of crude rubber in the London market, but locally prices remained entirely nominal. The *Journal of Commerce*, New York, in commenting on the situation, says:

"Despite the activity in London, no buying movement resulted here. Manufacturers consider London at present only a 'paper' market, but believe that the present tactics are especially prepared to whip them into the market if possible."

"The general business outlook here is not of a character to give the automobile industry any material boom. Manufacturers to no little extent are loath to part with money and bankers are not over enthusiastic over automobile paper. The consumption of footwear and other rubber apparel is at a minimum for the period in all probability. There is little snow anywhere and the country is clear from Chicago east to the seaboard."

NEW YORK QUOTATIONS.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and January 31—the current date:

PARÁ.	Feb. 1, '10.	Jan. 1, '11.	Jan. 30.
Islands, fine, new.....	179@180	118@119	112@113
Islands, fine, old.....	none here	122@123	none here
Upriver, fine, new.....	187@188	137@138	124@125
Upriver, fine, old.....	189@190	140@141	128@129
Islands, coarse, new.....	75@ 76	70@ 71	65@ 66
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	117@118	100@101	96@ 97
Upriver, coarse, old.....	none here	104@105	100@101
Cametá.....	84@ 85	72@ 73	69@ 70
Caucho (Peruvian), ball.....	110@111	99@100	94@ 95
Caucho (Peruvian), sheet.....	89@ 90	none here	none here

PLANTATION PARÁ.	Feb. 1, '10.	Jan. 1, '11.	Jan. 30.
Fine smoked sheet.....	200@201	156@157	140@141
Fine pale crepe.....	208@209	143@144	124@125
Fine sheets and biscuits.....	—@ —	138@139	118@119

CENTRALS.	Feb. 1, '10.	Jan. 1, '11.	Jan. 30.
Esmeralda, sausage.....	104@105	94@ 95	90@ 91
Guayaquil, strip.....	87@ 88	none here	none here
Nicaragua, scrap.....	99@100	89@ 90	88@ 89
Panama.....	none here	none here	none here
Mexican, scrap.....	100@101	88@ 89	86@ 87
Mexican, slab.....	78@ 80	56@ 57	50@ 51
Mangabeira, sheet.....	none here	75@ 76	68@ 70
Guayule.....	64@ 65	65@ 66	60@ 61
Balata, sheet.....	—@ —	74@ 75	82@ 84
Balata, block.....	—@ —	52@ 53	58@ 68

AFRICAN.	Feb. 1, '10.	Jan. 1, '11.	Jan. 30.
Lopori, ball.....	140@141	120@121	109@110
Aruwimi.....	120@121	104@105	105@106
Upper Congo, ball, red.....	125@126	108@109	109@110
Sierra Leone, 1st quality.....	123@124	119@120	105@106
Massai, red.....	124@125	119@120	106@107
Soudan niggers.....	107@108	105@106	94@ 95
Cameroon, ball.....	79@ 80	65@ 66	62@ 63
Benguela.....	75@ 76	82@ 83	75@ 76
Madagascar, pinky.....	99@100	none here	none here
Accra flake.....	25@ 26	44@ 45	40@ 41

EAST INDIAN.	Feb. 1, '10.	Jan. 1, '11.	Jan. 30.
Assam.....	100@101	93@ 94	90@ 91
Pontianak.....	—@ 6½	6@ 6½	6@ 6½
Borneo.....	57@ 67	none here	none here

Late Pará cables quote:

Per Kilo.	Per Kilo.
Islands, fine.....	4\$600
Islands, coarse.....	2\$500
Upriver, fine.....	7\$200
Upriver, coarse.....	4\$500
Exchange.....	16 3-16d.

Latest Manáos advices:

Upriver, fine.....	7\$000
Upriver, coarse.....	4\$000
Exchange.....	16 3-16d.

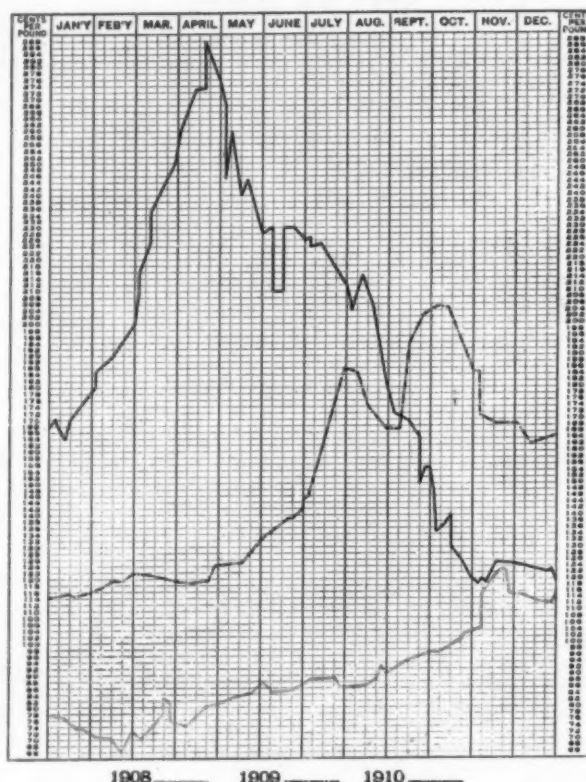


CHART SHOWING FLUCTUATIONS IN ISLANDS SPOT FINE PARA RUBBER AT NEW YORK, FOR THREE YEARS.

[Copyright, 1911, by Henry A. Gould.]

NEW YORK PRICES FOR DECEMBER (NEW RUBBER).

	1910.	1909.	1908.
Upriver, fine.....	\$1.36@1.50	\$1.75@1.93	\$1.15@1.23
Upriver, coarse.....	1.00@1.05	1.11@1.21	.89@ .94
Islands, fine.....	1.19@1.25	1.64@1.72	1.12@1.16
Islands, coarse.....	.70@ .73	.69@ .72	.52@ .61
Cametá.....	.72@ .76	.79@ .82	.57@ .64

African Rubbers.

NEW YORK STOCKS (IN TONS).

December 1, 1909.....	134	July 1, 1910.....	120
January 1, 1910.....	228	August 1.....	250
February 1.....	134	September 1.....	300
March 1.....	161	October 1.....	375
April 1.....	121	November 1.....	100
May 1.....	125	December 1.....	140
June 1.....	90	January 1, 1911.....	115

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—are slightly lower, as follows:

	January 1.	February 1.
Old rubber boots and shoes—domestic.....	9½@ 9¾	9¼@ 9¾
Old rubber boots and shoes—foreign.....	9 @ 9¾	8¾@ 8¾
Pneumatic bicycle tires.....	5 @ 5¼	4½@ 4¾
Automobile tires.....	8¾@ 8¾	8¾@ 8¾
Solid rubber wagon and carriage tires.....	9¼@ 9½	8½@ 9
White trimmed rubber.....	11¾@12	11 @11½
Heavy black rubber.....	6 @ 6¼	5 @ 5½
Air brake hose.....	5 @ 5½	4¾@ 5
Garden hose.....	2 @ 2¼	2 @ 2¼
Fire and large hose.....	2½@ 3	2½@ 2¾
Matting.....	1 @ 1½	1 @ 1½

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total 1910.	Total 1909.	Total 1908.
	Fine and Medium.	Coarse.			
Stocks, November 30.....	128	28 =	156	218	248
Arrivals, December.....	1,149	384 =	1,533	2,675	2,299
Aggregating	1,277	412 =	1,689	2,893	2,547
Deliveries, December	1,096	382 =	1,478	2,686	2,303
Stocks, December 31.....	181	30 =	211	207	244
PARA. ENGLAND.					
	1910.	1909.	1908.	1910.	1909.
Stocks, Nov. 30... tons	1,190	1,385	475	1,335	500
Arrivals, December ...	2,315	3,140	3,015	1,248	960
Aggregating	3,505	4,525	3,490	2,583	1,460
Deliveries, December ...	2,830	4,375	2,795	1,093	1,075
Stocks, December 31 ..	675	150	695	1,490	385
World's visible supply, December 31... tons	3,891	2,358	2,484		
Para receipts, July 1 to December 31.....	13,400	14,970	14,075		
Para receipts of caucho, same dates.....	2,370	1,840	1,665		
Afloat from Para to United States, Dec. 31.	435	916	849		
Afloat from Para to Europe, Dec. 31.....	1,080	700	251		

Plantation Rubber From the Far East.

EXPORTS OF CEYLON GROWN RUBBER.

[From January 1 to December 19, 1909 and 1910. Compiled by the Ceylon Chamber of Commerce.]

	1909.	1910.
To Great Britain	793,061	1,495,071
To United States	470,812	1,480,693
To Canada	34,377	7,476
To Belgium	20,035	66,114
To Germany	8,893	5,030
To Australia	3,246	3,246
To Japan	835	1,909
To Italy	219	1,041
To Austria	1,639	...
To France	2,184	...
To China .....	...	...
Total	1,332,055	3,074,783

[Same period 1908—790,815 pounds; same 1907—506,373.]

TOTAL EXPORTS FROM MALAYA.

[From January 1 to dates named. Reported by BARLOW & Co., Singapore. These figures include the production of the Federated Malay States, but not of Ceylon.]

	1908.	1909.	1910.
Singapore (to Nov. 24) .. pounds	1,857,312	2,226,799	3,308,622
Penang (to Nov. 15)	1,289,124	1,931,643	2,090,175
Port Swettenham (to Nov. 12) ..	2,138,262	7,224,781	...
Total	3,146,436	6,296,704	12,623,578

PARA RUBBER VIA EUROPE.

POUNDS.	
DEC. 17.—By the <i>Pennsylvania</i> =Hamburg:	
N. Y. Commercial Co. (Fine)...	17,000
A. T. Morse & Co. (Fine).....	5,500
Wallace L. Gough Co. (Fine)...	4,500
DEC. 19.—By the <i>Baltic</i> =Liverpool:	
N. Y. Commercial Co. (Fine)...	140,000
A. T. Morse & Co. (Fine).....	66,000
James T. Johnstone (Fine)....	3,500
DEC. 20.—By the <i>Amerika</i> =Hamburg:	
A. T. Morse & Co. (Fine).....	4,500
General Rubber Co. (Fine)....	22,500
N. Y. Commercial Co. (Coarse) ..	4,500
DEC. 23.—By the <i>Lusitania</i> =Liverpool:	
N. Y. Commercial Co. (Fine)...	22,500
Robinson & Co. (Fine).....	11,000
Rubber Trading Co. (Fine)....	4,500
DEC. 28.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold (Fine).....	56,000
A. T. Morse & Co. (Fine).....	18,000
N. Y. Commercial Co. (Fine)...	11,000
DEC. 29.—By the <i>President Lincoln</i> =Hamburg:	
Poel & Arnold (Coarse).....	22,500
Rubber Trading Co. (Fine)....	3,500

DEC. 31.—By the <i>Campania</i> =Liverpool:	
N. Y. Commercial Co. (Fine)...	90,000
Poel & Arnold (Fine).....	15,000
Robinson & Co. (Fine).....	11,000
JAN. 3.—By the <i>Minnewaska</i> =London:	
General Rubber Co. (Coarse).....	22,500
JAN. 3.—By the <i>Oruba</i> =Mollendo:	
General Rubber Co. (Caucho).....	11,000
JAN. 9.—By the <i>Coronia</i> =Liverpool:	
Robinson & Co. (Fine).....	7,000
Poel & Arnold (Fine).....	3,500
JAN. 13.—By the <i>Lusitania</i> =Liverpool:	
Poel & Arnold (Coarse).....	90,000
JAN. 16.—By the <i>Celtic</i> =Liverpool:	
N. Y. Commercial Co. (Fine)...	34,000
A. T. Morse & Co. (Fine).....	17,000
Rubber Trading Co. (Fine)....	5,000
Raw Products Co. (Coarse)....	4,500
JAN. 19.—By the <i>President Grant</i> =Hamburg:	
N. Y. Commercial Co. (Coarse) ..	22,500

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

POUNDS.	
DEC. 17.—By the <i>Senator</i> =Bluefields:	
Manhattan Rubber Manufacturing Co.	3,000

New York.

SUMMARY OF PRICES FOR 1910.

	UPRIVER.		ISLAND.		CAMETA.
	Fine.	Coarse.	Fine.	Coarse.	
January	178@187	111@115	167@181	71@ 75	79@ 85
February	187@210	115@128	181@204	75@ 89	85@ 98
March	209@258	130@170	203@245	90@107	95@128
April	258@292	170@187	245@278	107@115	128@135
May	235@280	160@182	226@272	93@109	110@127
June	223@245	150@163	213@230	93@105	110@125
July	216@240	148@155	208@225	98@103	110@123
August	187@220	140@148	178@210	94@ 98	96@110
September	155@190	122@142	150@182	90@ 92	90@ 98
October	137@150	102@120	120@146	73@ 90	75@ 89
November	136@152	102@107	120@128	73@ 75	75@ 78
December	136@150	100@105	119@125	70@ 73	72@ 76
AVERAGE PRICES.					
1910	201 1/4	136 1/4	189 3/4	90	100
1909	159 3/4	107	149 3/4	66 1/4	77
1908	93 1/4	67 1/2	88 1/4	47 1/2	52
1907	109 1/4	88	104 1/2	61 3/4	65 1/2
1906	124 1/2	93 1/2	121	70	72 1/4
1905	128 1/2	93 1/2	125 1/2	72	74

IMPORTS FROM PARA AT NEW YORK.

The Figures Indicate Weight in Pounds.

DECEMBER 23.—By the steamer *Clement*, from Manáos and Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.	197,400	13,700	88,600	32,200	331,900
Poel & Arnold	118,500	31,500	91,800	...	241,800
New York Commercial Co.	97,100	22,500	29,200	1,600	150,400
General Rubber Co.	73,900	13,300	20,200	1,700	109,100
H. A. Astlett	16,500	2,900	18,800	1,400	39,600
Hagemeyer & Brunn	11,400	...	10,500	...	21,900
Henderson & Korn	3,600	...	1,800	...	5,400
Czarnikow-Rionda Co.	7,000	...	...	...	7,000
Total	525,400	83,900	260,900	36,900	907,100

JANUARY 4.—By the steamer *Hubert*, from Manáos and Pará:

Poel & Arnold	99,200	56,000	89,200	4,000	248,400
New York Commercial Co.	125,600	25,600	77,000	2,100	230,300
A. T. Morse & Co.	74,400	24,500	41,400	400	140,700
General Rubber Co.	81,100	18,300	10,300	1,500	111,100
H. A. Astlett	36,500	6,800	15,900	...	59,200
G. Amsinck & Co.	36,300	700	7,100	...	44,100
Henderson & Korn	11,900	...	33,000	...	44,900
Hagemeyer & Brunn	12,100	...	14,500	...	26,600
Total	477,100	131,900	288,300	8,000	905,300

JANUARY 23.—By the steamer *Bernard*, from Manáos and Pará:

Poel & Arnold	100,900	39,300	165,100	6,900	312,200
New York Commercial Co.	73,600	26,100	48,200	8,600	156,500
A. T. Morse & Co.	53,700	11,700	59,200	...	124,600
L. Johnson & Co.	42,700	13,000	7,200	1,300	64,200
Hagemeyer & Brunn	17,400	1,100	19,100	...	37,600
General Rubber Co.	23,200	1,800	...	...	25,000
H. A. Astlett	7,100	1,100	8,600	...	16,800
Henderson & Korn	1,800	...	8,000	...	9,800
Total	320,400	94,100	315,400	16,800	746,700

DEC. 17.—By the *Monterey*=Frontera:

International Products Co.	5,000
Judkins & McCormick Co.	2,500
Harburger & Stack	2,000
E. N. Tibbals & Co.	1,500
W. L. Wadleigh	1,500
H. Marquardt & Co.	1,000
For Havre	4,500
Total	18,000

DEC. 19.—By the *Matanzas*=Tampico:

N. Y. Commercial Co.	*135,000
Ed Maurer	*95,000
Continental-Mexican Rubber Co	*75,000
Poel & Arnold	15,000
Total	*320,000

DEC. 19.—By the *Prinz Sigismund*=Colombia:

Caballero & Blanco	9,000
A. Javanillo & Co.	5,500
Lionel Hagenaers & Co.	3,500
Suzarte & Whitney	2,500
Delima Cortisoz & Co.	1,500
Roldan & Van Sickle	1,000
Total	23,000

DEC. 21.—By the *Byron*=Bahia:

J. H. Rossbach & Bros.	15,500
Adolph Hirsch & Co.	6,500
Total	22,000

DEC. 22.—By the *Antilles*=New Orleans:

A. T. Morse & Co.	4,500
A. N. Rotholz	3,500
George Haegan & Co.	1,500
G. Amsinck & Co.	1,500
Isaac Brandon & Bros.	1,000
Total	12,000

Dec. 23.—By the *Merida*=Frontera:
 Harburger & Stack..... 2,000
 E. Steiger & Co..... 1,500
 E. N. Tibbals & Co..... 1,000
 International Products Co..... 1,000
 For Europe..... 5,000

Dec. 24.—By the *Advance*=Colon:
 G. Amsinck & Co..... 10,000
 American Trading Co..... 3,500
 J. Sambrada & Co..... 2,500
 C. T. Morse & Co..... 2,000
 Mecke & Co..... 2,000
 Lazars Freres..... 2,000
 H. Mann & Co..... 1,000

Dec. 24.—By the *El Occidente*=Galveston:
 Continental-Mexican Rubber Co.*100,000
 For London..... *22,500

Dec. 27.—By the *Allemania*=Colombia:
 A. Javanillo & Co..... 4,500
 Lionel Hagenaers & Co..... 2,000
 Pablo Calvet & Co..... 1,500
 Caballero & Blanco..... 1,500
 Delima Cortisoz & Co..... 1,500

Dec. 27.—By the *Vigilancia*=Tampico:
 Continental-Mexican Rubber Co.*75,000
 N. Y. Commercial Co..... *70,000
 Ed. Maurer..... *90,000

Dec. 27.—By the *Prins Joachim*=Colon:
 Pablo Calvet & Co..... 3,000
 G. Amsinck & Co..... 2,500
 Mecke & Co..... 1,500
 Wessels Kulenkampf & Co..... 1,000

Dec. 28.—By the *Cymric*=Liverpool:
 James T. Johnstone..... 15,000
 Poel & Arnold..... *13,500

Dec. 28.—By the *Panama*=Colon:
 L. Johnson & Co..... 16,000
 G. Amsinck & Co..... 8,000
 Piza, Nephews & Co..... 10,000
 N. Y. Commercial Co..... 5,000
 J. Sambrada & Co..... 3,000
 Hirzel, Feltman & Co..... 1,500

Dec. 29.—By the *Frutera*=Honduras:
 A. Rosenthal & Sons..... 4,000
 N. Y. Commercial Co..... 1,500

Dec. 29.—By the *President Lincoln*=Hamburg:
 Raw Products Co..... *11,000
 George A. Alden & Co..... *5,500

Dec. 30.—By the *Esperanza*=Vera Cruz:
 H. Marquardt & Co..... 3,500
 International Products Co..... 1,000

Dec. 30.—By the *El Rio*=Galveston:
 Continental-Mexican Rubber Co.*75,000
 E. S. Churchill..... *20,000

JAN. 3.—By the *Oruba*=Colombia:
 G. Amsinck & Co..... 8,000
 Mecke & Co..... 2,000
 A. M. Capen's Sons..... 2,000

JAN. 4.—By the *Verdi*=Bahia:
 J. H. Rossbach & Bros..... 50,000
 Adolph Hirsch & Co..... 48,000

JAN. 4.—By the *Alliance*=Colon:
 G. Amsinck & Co..... 14,000
 Mecke & Co..... 5,000
 Piza, Nephews & Co..... 4,000
 F. Rosenstern & Co..... 2,000
 Wessels Kulenkampf & Co..... 1,000
 A. Rosenthal & Sons..... 1,000

JAN. 4.—By the *El Valle*=Galveston:
 Continental-Mexican Rubber Co..... *50,000

JAN. 4.—By the *Stovangeren*=Bluefields:
 Atlantic Fruit Co..... 3,000

JAN. 4.—By the *Maracaibo*=Curacao:
 Suzarte & Whitney..... 2,500
 G. Amsinck & Co..... 1,000

JAN. 4.—By the *Prins Eitel Friedrich*=Colombia:
 Pablo Calvet & Co..... 6,000
 J. H. Rossbach & Bros..... 5,000
 A. Javanillo & Co..... 4,000
 Lionel Hagenaers & Co..... 2,500
 Caballero & Blanco..... 2,500
 Kunhardt & Co..... 1,500
 Delima Cortisoz & Co..... 1,000
 R. Del Castillo & Co..... 1,000
 Semler & Wilber..... 1,000
 Roldan & Van Sickle..... 1,000

JAN. 5.—By the *Memus*=New Orleans:
 A. T. Morse & Co..... 4,000
 Manhattan Rubber Manufacturing Co..... 3,000
 Robinson & Co..... 1,500
 Eggers & Heinlein..... 1,000

JAN. 6.—By the *Seguranca*=Tampico:
 Continental-Mexican Rubber Co.*150,000
 Ed. Maurer..... *100,000
 N. Y. Commercial Co..... *35,000
 For Europe..... *110,000

JAN. 6.—By the *Mexico*=Frontera:
 Harburger & Stack..... 4,500
 Rubber Trading Co..... 4,000
 Henderson & Korn..... 2,000
 E. Steiger & Co..... 1,500
 N. Y. Commercial Co..... 1,500
 Isaac Kubie Co..... 1,000
 American Trading Co..... 1,000
 H. Marquardt & Co..... 1,000
 For Havre..... 2,500

JAN. 9.—By the *Caronia*=Liverpool:
 A. T. Morse & Co..... 11,500
 Poel & Arnold..... 3,500

JAN. 9.—By the *Albion*=Colombia:
 Caballero & Blanco..... 9,000
 A. Held..... 2,000
 A. Javanillo & Co..... 2,000
 Maitland, Coppel & Co..... 1,500
 Kunhardt & Co..... 1,500
 Rio Honda Commercial Co..... 1,000
 J. A. Pauli & Co..... 1,000
 G. Amsinck & Co..... 1,000
 Heilbron Wolff & Co..... 1,000

JAN. 9.—By the *Colon*=Colon:
 G. Amsinck & Co..... 6,000
 New York Commercial Co..... 5,500
 Isaac Brandon & Bros..... 3,000

JAN. 10.—By the *El Mundo*=Galveston:
 Continental-Mexican Rubber Co.*80,000
 Charles T. Wilson..... *11,000

JAN. 12.—By the *African Prince*=Bahia:
 J. H. Rossbach & Bros..... 20,000
 Adolph Hirsch & Co..... 5,000

JAN. 12.—By the *Batavia*=Hamburg:
 George A. Alden & Co..... *13,500

JAN. 12.—By the *Antilles*=Tampico:
 Continental-Mexican Rubber Co.*150,000
 New York Commercial Co.*65,000
 Ed. Maurer..... *43,000
 Poel & Arnold..... *22,500
 For Europe..... *75,000

JAN. 14.—By the *Morro Castle*=Vera Cruz:
 George A. Alden & Co..... 1,000
 For Havre..... 5,000

JAN. 16.—By the *Prinz Sigismund*=Colombia:
 R. Del Castillo & Co..... 8,000
 Kunhardt & Co..... 4,500
 Lionel Hagenaers & Co..... 2,500
 A. Javanillo & Co..... 1,500
 Caballero & Blanco..... 1,000

JAN. 16.—By the *Celtic*=Liverpool:
 James T. Johnstone..... 11,500

JAN. 16.—By the *Senator*=Bluefields:
 Manhattan Rubber Manufacturing Co..... 3,000
 Robinson & Co..... 2,500
 Wessels Kulenkampf & Co..... 1,000

JAN. 17.—By the *Magdalena*=Colon:
 G. Amsinck & Co..... 5,000
 Mecke & Co..... 2,000
 Pablo Calvet & Co..... 1,500
 Fruit Despatch Co..... 1,500
 J. Sambrada & Co..... 1,500
 Isaac Brandon & Co..... 2,500
 A. Rosenthal & Sons..... 1,000

JAN. 18.—By the *Hawaiian*=Mexico:
 American Trading Co..... 6,500

JAN. 18.—By the *Advance*=Colon:
 G. Amsinck & Co..... 25,000
 L. Johnson & Co..... 7,000
 Fidanque Bros. & Co..... 6,000
 Mecke & Co..... 5,500
 J. Sambrada & Co..... 4,500
 Pablo Calvet & Co..... 3,000
 Roldan & Van Sickle..... 1,500
 Graham, Hinkley & Co..... 1,500
 A. T. Morse & Co..... 1,000
 Dumarest Bros. & Co..... 1,000
 A. M. Capen's Sons..... 1,000
 Wessels Kulenkampf & Co..... 1,000
 J. Julia & Co..... 1,000

JAN. 19.—By the *Proteus*=New Orleans:
 A. N. Rotholz..... 3,000

JAN. 19.—By the *President Grant*=Hamburg:
 A. T. Morse & Co..... *18,000
 Raw Products Co..... *17,000

JAN. 20.—By the *El Rio*=Galveston:
 Continental-Mexican Rubber Co.*115,000
 Raw Products Co..... *15,000

JAN. 20.—By the *Asiatic*=Bahia:
 J. H. Rossbach & Bros..... 45,000
 A. D. Hitch & Co..... 3,500

JAN. 20.—By the *Matanzas*=Tampico:
 Ed. Maurer..... *190,000
 Continental-Mexican Rubber Co.*150,000
 New York Commercial Co..... *67,000

JAN. 21.—By the *Merida*=Frontera:
 H. Marquardt & Co..... 7,000
 Harburger & Stack..... 5,500
 E. N. Tibbals & Co..... 3,500
 George A. Alden & Co..... 1,500
 International Products Co..... 1,500
 J. W. Wilson & Co..... 1,000

AFRICAN.

POUNDS.

Dec. 17.—By the *Pennsylvania*=Hamburg:
 George A. Alden & Co..... 50,000
 General Rubber Co..... 11,500
 Rubber Trading Co..... 5,500

Dec. 19.—By the *Baltic*=Liverpool:
 Rubber Trading Co..... 24,000
 George A. Alden & Co..... 20,000
 Poel & Arnold..... 5,000
 Raw Products Co..... 3,500

Dec. 20.—By the *Amerika*=Hamburg:
 George A. Alden & Co..... 11,500
 Poel & Arnold..... 11,000
 Rubber Trading Co..... 9,000

Dec. 20.—By the *Minnetonka*=London:
 Robert Badenhop..... 2,100

Dec. 21.—By the *Vaderland*=Antwerp:
 Poel & Arnold..... 70,000
 Rubber Trading Co..... 15,000
 Wallace L. Gough Co..... 15,000
 Robert Badenhop..... 11,200

Dec. 23.—By the *St. Louis*=London:
 Poel & Arnold..... 33,500

Dec. 27.—By the *Agnella Ciampa*=Lisbon:
 Livesey & Co..... 11,500

Dec. 28.—By the *Gwiana*=Bordeaux:
 George A. Alden & Co..... 18,000

Dec. 28.—By the *Cymric*=Liverpool:
 George A. Alden & Co..... 22,500
 A. T. Morse & Co..... 11,000
 Poel & Arnold..... 7,000
 Raw Products Co..... 3,500

Dec. 28.—By the *Kroonland*=Antwerp:
 George A. Alden & Co..... 60,000
 Poel & Arnold..... 33,500
 Wallace L. Gough Co..... 15,000
 A. T. Morse & Co..... 13,500
 Rubber Trading Co..... 11,500
 Robert Badenhop..... 4,700

Dec. 29.—By the *President Lincoln*=Hamburg:
 George A. Alden & Co..... 25,000
 Poel & Arnold..... 22,500
 Wallace L. Gough Co..... 13,500
 Robert Badenhop..... 17,600
 A. T. Morse & Co..... 8,000
 General Rubber Co..... 4,500
 Raw Products Co..... 2,500
 Rubber Trading Co..... 2,500

Dec. 30.—By the *Mesaba*=London:
 James T. Johnstone..... 9,000

Dec. 31.—By the *Campania*=Liverpool:
 Poel & Arnold..... 11,500
 Robinson & Co..... 7,000
 Livesey & Co..... 5,500
 Raw Products Co..... 4,500

JAN. 3.—By the *Lapland*=Antwerp:
 Poel & Arnold..... 40,000

JAN. 3.—By the *Cedric*=Liverpool:
 George A. Alden & Co..... 45,000
 Rubber Trading Co..... 11,500
 Robinson & Co..... 2,500

JAN. 3.—By the *Lorraine*=Havre:
 George A. Alden & Co..... 20,000

JAN. 5.—By the *St. Paul*=London:
 A. T. Morse & Co..... 37,000
 Poel & Arnold..... 33,500

JAN. 9.—By the *Caronia*=Liverpool:
 General Rubber Co..... 7,000
 George A. Alden & Co..... 5,000
 James T. Johnstone..... 3,500
 Raw Products Co..... 3,000

JAN. 9.—By the *Hudson*=Bordeaux:
 George A. Alden & Co..... 18,000
 Livesey & Co..... 11,500

JAN. 9.—By the *Minneapolis*=London:
 George A. Alden & Co..... 22,500

RUBBER FLUX

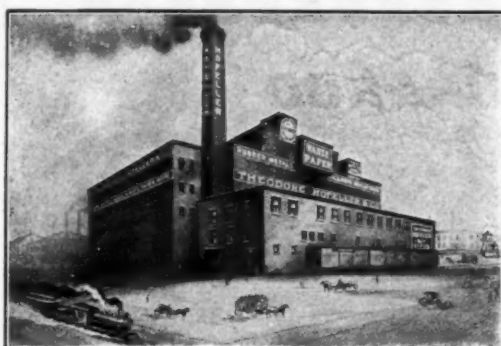
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Dielectric and pressure tests are increased by replacing all so-called substitutes with our Mineral Rubber. Our product enables you to increase the speed of wire thru the insulating head of the tubing machine without breaking or ruffling the surface of the rubber. It will also retard oxidization to a wonderful extent.

We are now supplying 60% of the insulated wire factories making rubber covered wire, but we would like to have the other 40% investigate and get acquainted with the special qualities our Hydro-Carbon has for their particular requirements.

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JAN. 11.—By the <i>Bluecher</i> =Hamburg:	
General Rubber Co.....	35,000
A. T. Morse & Co.....	22,500
George A. Alden & Co.....	7,000
Raw Products Co.....	4,500
For Akron, Ohio.....	4,500
	73,500
JAN. 11.—By the <i>Niagara</i> =Havre:	
Poel & Arnold.....	25,000
JAN. 11.—By the <i>Gothland</i> =Antwerp:	
Poel & Arnold.....	11,500
JAN. 12.—By the <i>Batavia</i> =Hamburg:	
A. T. Morse & Co.....	45,000
Poel & Arnold.....	45,000
George A. Alden & Co.....	13,500
Wallace L. Gough Co.....	11,000
Rubber Trading Co.....	3,000
For Akron, Ohio.....	7,000
	124,500
JAN. 13.—By the <i>Lusitania</i> =Liverpool:	
Poel & Arnold.....	13,500
JAN. 13.—By the <i>Kaiserin Auguste Victoria</i> =Lisbon:	
George A. Alden & Co.....	22,500
JAN. 16.—By the <i>Celtic</i> =Liverpool:	
Rubber Trading Co.....	5,500
Livesey & Co.....	4,500
	10,000
JAN. 19.—By the <i>President Grant</i> =Hamburg:	
Poel & Arnold.....	10,000
Raw Products Co.....	9,000
Robert Radenhop.....	4,100
Wallace L. Gough Co.....	3,500
George A. Alden & Co.....	3,500
	30,000
JAN. 19.—By the <i>Samland</i> =Antwerp:	
A. T. Morse & Co.....	11,500
Poel & Arnold.....	11,000
Raw Products Co.....	7,000
	29,500

EAST INDIAN.

[*Denotes plantation rubber.]

DEC. 19.—By the <i>Baltic</i> =Liverpool:	
Henderson & Korn.....	*15,000
DEC. 20.—By the <i>Minnetonka</i> =London:	
Poel & Arnold.....	*30,000
Ed. Maurer.....	*18,000
	*48,000
DEC. 21.—By the <i>Koenigin Luise</i> =Genoa:	
Ed. Maurer.....	*7,000
DEC. 23.—By the <i>Muncaster Castle</i> =Singapore:	
Wallace L. Gough Co.....	25,000
Rubber Import Co.....	7,000
Malaysian Rubber Co.....	27,000
	59,000
DEC. 23.—By the <i>St. Louis</i> =London:	
New York Commercial Co.....	*5,000
Poel & Arnold.....	*5,000
William H. Stiles.....	*4,500
	*14,500
DEC. 28.—By the <i>Oceanic</i> =Liverpool:	
New York Commercial Co.....	*75,000
Poel & Arnold.....	*22,500
Robinson & Co.....	9,000
	106,500
DEC. 28.—By the <i>Kroonland</i> =Antwerp:	
A. T. Morse & Co.....	*35,000
DEC. 30.—By the <i>Indrawadi</i> =Singapore:	
Haebler & Co.....	28,000
Wallace L. Gough Co.....	*5,500
Malaysian Rubber Co.....	*22,500
	56,000
DEC. 30.—By the <i>Mesaba</i> =London:	
General Rubber Co.....	*56,000
James T. Johnstone.....	*9,000
	*65,000
DEC. 31.—By the <i>Stolzenfels</i> =Colombo:	
New York Commercial Co.....	*35,000
A. T. Morse & Co.....	*33,500
	*68,500
DEC. 31.—By the <i>Campania</i> =Liverpool:	
William H. Stiles.....	*17,500

DEC. 31.—By the <i>Indravelli</i> =Singapore:	
Haebler & Co.....	11,000
Ed. Maurer.....	20,000
Wallace L. Gough Co.....	*15,000
	46,000
JAN. 3.—By the <i>Minnetonka</i> =London:	
General Rubber Co.....	*15,000
New York Commercial Co.....	*11,000
Raw Products Co.....	*5,500
	*31,500
JAN. 4.—By the <i>Crostafels</i> =Colombo:	
New York Commercial Co.....	*35,000
A. T. Morse & Co.....	*25,000
	*60,000
JAN. 7.—By the <i>Pathan</i> =Singapore:	
Malaysian Rubber Co.....	19,000
JAN. 9.—By the <i>Minneapolis</i> =London:	
James T. Johnstone.....	*15,500
New York Commercial Co.....	*3,500
	*19,000
JAN. 9.—By the <i>Lothian</i> =Singapore:	
Haebler & Co.....	22,500
Poel & Arnold.....	11,500
Wallace L. Gough Co.....	*9,000
	43,000
JAN. 12.—By the <i>Adriatic</i> =London:	
Poel & Arnold.....	*15,000
New York Commercial Co.....	*8,000
	*23,000
JAN. 13.—By the <i>Inveric</i> =Colombo:	
New York Commercial Co.....	*45,000
A. T. Morse & Co.....	*7,000
	*52,000
JAN. 16.—By the <i>Minnehaha</i> =London:	
General Rubber Co.....	*77,000
Poel & Arnold.....	*67,000
Wallace L. Gough Co.....	11,500
	155,500
JAN. 19.—By the <i>New York</i> =London:	
New York Commercial Co.....	*50,000
A. T. Morse & Co.....	*25,000
Poel & Arnold.....	*22,500
	*97,500

GUTTA-JELUTONG.

DEC. 23.—By the <i>Muncaster Castle</i> =Singapore:	
Wallace L. Gough Co.....	250,000
Haebler & Co.....	250,000
Rubber Import Co.....	110,000
Poel & Arnold.....	200,000
George A. Alden & Co.....	55,000
L. Littlejohn & Co.....	450,000
	1,315,000
DEC. 29.—By the <i>Indrawadi</i> =Singapore:	
L. Littlejohn & Co.....	175,000
DEC. 31.—By the <i>Indravelli</i> =Singapore:	
Haebler & Co.....	650,000
Rubber Import Co.....	150,000
L. Littlejohn & Co.....	900,000
Wallace L. Gough Co.....	450,000
George A. Alden & Co.....	100,000
Poel & Arnold.....	150,000
	2,400,000
JAN. 7.—By the <i>Pathan</i> =Singapore:	
Haebler & Co.....	180,000
JAN. 9.—By the <i>Lothian</i> =Singapore:	
Haebler & Co.....	350,000
L. Littlejohn & Co.....	550,000
Wallace L. Gough Co.....	155,000
George A. Alden & Co.....	125,000
Poel & Arnold.....	55,000
	1,235,000

GUTTA-PERCHA.

DEC. 23.—By the <i>Muncaster Castle</i> =Singapore:	
L. Littlejohn & Co.....	70,000
DEC. 31.—By the <i>Indravelli</i> =Singapore:	
Haebler & Co.....	22,500
L. Littlejohn & Co.....	22,500
	45,000
JAN. 7.—By the <i>Pathan</i> =Singapore:	
L. Littlejohn & Co.....	22,500
JAN. 9.—By the <i>Lothian</i> =Singapore:	
L. Littlejohn & Co.....	22,500
George A. Alden & Co.....	11,000
	33,500

BALATA.

POUNDS.

DEC. 20.—By the <i>Saramaca</i> =Trinidad:	
I. A. Pauli & Co.....	7,000
Ed. Maurer.....	4,500
	11,500
JAN. 3.—By the <i>Marowijne</i> =Demarara:	
Middleton & Co.....	7,000
JAN. 12.—By the <i>Korona</i> =Demarara:	
Ed. Maurer.....	13,500
Suzarte & Whitney.....	6,500
G. Amsinck & Co.....	2,000
	22,000
JAN. 18.—By the <i>Saramaca</i> =Trinidad:	
G. Amsinck & Co.....	28,000
Middleton & Co.....	11,500
Bartling & DeLeon.....	2,500
	42,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—DECEMBER.

Imports:	Pounds.	Value.
India-rubber.....	6,158,957	\$6,877,628
Balata.....	21,060	9,684
Gutta-percha.....	115,959	27,917
Gutta-jelutong (Pontianak).....	3,582,620	171,781
Guayule.....	1,223,252	635,572
Total.....	11,101,848	\$7,722,582
Exports:		
India-rubber.....	200,201	\$233,204
Balata.....	6,290	3,018
Gutta-percha.....	.....	.....
Guayule.....	4,200	1,300
Reclaimed rubber.....	133,844	16,171
Rubber scrap imported.....	1,251,388	\$91,985
Rubber scrap exported.....	316,170	35,737

BOSTON ARRIVALS.

Nov. 8.—By the <i>Bohemian</i> =Liverpool:	
George A. Alden & Co. (African).....	6,800
Nov. 10.—By the <i>Cambrian</i> =Liverpool:	
George A. Alden & Co. (Ceylon).....	4,500
Nov. 12.—By the <i>Zeeland</i> =Liverpool:	
Poel & Arnold (African).....	3,600
Nov. 16.—By the <i>St. Patrick</i> =Singapore:	
State Rubber Co. (Ceylon).....	37,500
State Rubber Co. (Jelutong).....	1,090,000
Wallace L. Gough Co. (Jelutong).....	160,000
L. Littlejohn & Co. (Jelutong).....	100,000
George A. Alden & Co. (Jelutong).....	55,000
	1,442,500
Nov. 24.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold (African).....	11,400
Nov. 24.—By the <i>Welch Prince</i> =Singapore:	
State Rubber Co. (Jelutong).....	880,000
DEC. 8.—By the <i>Angham</i> =London:	
Poel & Arnold (African).....	8,800
DEC. 14.—By the <i>Bohemian</i> =Liverpool:	
George A. Alden & Co. (African).....	4,400
DEC. 18.—By the <i>Muncaster Castle</i> =Singapore:	
State Rubber Co. (Ceylon).....	26,200
L. Littlejohn & Co. (Jelutong).....	215,000
Haebler & Co. (Jelutong).....	230,000
	471,200
DEC. 21.—By the <i>Devonian</i> =Liverpool:	
George A. Alden & Co. (African).....	5,600
DEC. 23.—By the <i>Indrawadi</i> =Singapore:	
State Rubber Co. (Ceylon).....	15,500
State Rubber Co. (Jelutong).....	625,000
L. Littlejohn & Co. (Jelutong).....	72,000
Haebler & Co. (Jelutong).....	56,000
	768,500
DEC. 29.—By the <i>Sagamore</i> =London:	
L. Sutro & Co. (African).....	7,000

CONSUMPTION OF INDIA-RUBBER BY THE UNITED STATES AND CANADA (IN TONS).

[From the Annual Statistical Summary of ALBERT T. MORSE & Co., New York.]

DETAILS.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Imports to United States....	17761	18620	23095	20468	23208	21842	24760	27623	28635	29936	29433	29477	31129	32916
Exports to Europe.....	250	150	300	450	680	430	490	274	357	1625	558	480	681	1340
	17421	18470	22795	20018	22528	21412	24270	27349	28278	28311	28875	28991	30448	31576
Add stock on January 1....	641	744	591	712	1198	1399	331	256	305	537	365	606	1553	1332
	18062	19214	23386	20730	23726	22811	24601	27605	28583	28848	29240	29603	32001	32908
Less stock close of year.....	744	591	712	1198	1399	331	256	305	537	365	606	1553	*1332	523
Deliveries to manufacturers..	17318	18623	22674	19532	22327	22480	24345	27300	28046	28483	28634	28050	30669	32385
Imports of Guayule rubber, 10,656 tons.														

*Includes Crispin's cargo, 958 tons.



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Rubber Receipts at Manaos.

DURING November and five months of the crop season, for three years (courtesy of Messrs. Scholz & Co.):

FROM—	NOVEMBER.			JULY-NOVEMBER.		
	1910.	1909.	1908.	1910.	1909.	1908.
Rio Purús-Acre	788	1,579	556	3,498	3,475	3,071
Rio Madeira	468	310	289	1,412	1,638	1,464
Rio Juruá	104	322	389	536	941	987
Rio Javary-Iquitos	348	480	331	1,117	1,514	1,227
Rio Solimões	152	225	256	553	465	509
Rio Negro	12	76	13	13	90	19
Total	1,872	2,992	1,834	7,129	8,123	7,277
Caucho	237	357	224	1,111	1,533	1,070
Total	2,109	3,349	2,058	8,240	9,656	8,347
For Shipment from						
Manaos	1,532	2,322	1,836	6,304	7,583	6,729
Pará	577	1,027	222	1,936	2,073	1,618
Total	2,109	3,349	2,058	8,240	9,656	8,347

Antwerp.

RUBBER STATISTICS FOR DECEMBER.

DETAILS.	1910.	1909.	1908.	1907.	1906.
Stocks, Nov. 30..kilos	568,148	735,616	604,170	1,015,282	714,919
Arrivals in December	300,703	315,997	520,182	219,544	636,460
Congo sorts	234,673	215,983	454,701	190,000	579,700
Other sorts	66,030	100,014	65,481	29,544	56,760
Aggregating	868,851	1,051,613	1,124,352	1,234,826	1,351,379
Sales in December....	280,639	510,101	528,617	227,932	693,195
Stocks, December 31.	588,212	541,512	595,735	1,006,894	658,184
Arrivals since Jan. 1..	4,058,676	4,685,958	5,035,344	5,054,473	5,772,062
Congo sorts	3,105,357	3,492,332	4,262,531	4,346,141	4,593,759
Other sorts	953,319	1,193,626	772,813	708,332	1,178,303
Sales since Jan. 1.....	4,011,974	4,740,181	5,446,503	4,705,763	5,849,065

RUBBER ARRIVALS FROM THE CONGO.

DECEMBER 14.—By the steamer *Leopoldville*:

Bunge & Co.....(Société Générale Africaine) kilos	149,500
Do	(Chemins de fer Grands Lacs) 2,200
Do	(Société Abir) 950
Do	(Comité Spécial Katanga) 5,700
Do	(Equatoriale Congolaise) 500
Société Coloniale Anversoise....(Belge du Haut Congo)	1,100
Do	(Cie. du Lomami) 1,100
Do	(Cie. du Kasai) 102,900
Cassart & Henrion.....	2,200
Société Générale de Commerce.....(Alimaïenne)	1,900
L. & W. Van de Velde.....	2,500 270,550

JANUARY 6.—By the steamer *Bruxellesville*:

Bunge & Co.....(Société Générale Africaine) kilos	93,200
Do	(Chemins de fer Grands Lacs) 5,800
Do	(Comité Spécial Katanga) 3,400
Do	(Comptoir Commercial Congolais) 64,200
Do	(Société Comm. and Financ. Africaine) 2,800
L. & W. Van de Velde.....(Cie. du Kasai)	65,000
Do	3,500
Société Coloniale Anversoise.....	275
Willart Frères	3,000
Cassart & Henrion.....	800 241,975

Paris.

R. O. AHLERS & Co. report [January 2]:

With the declining quotations and uncertain tendency, transactions have been restricted to a hand-to-mouth supply, while holders of Upriver lots continue to keep out of the market at present prices.

THE HAVRE RUBBER MARKET.

ARRIVALS during 1910 at Havre were larger than in any former year, and notably larger than for 1909. The arrivals for four years past may be analyzed thus:

FROM—	1907.	1908.	1909.	1910.
French Congo	Kilos 892,655	884,733	840,324	1,109,500
Other sources (except Pará) ..	232,321	130,000	371,514	302,901
Pará	3,339,147	2,483,444	2,569,338	3,045,627
Total	4,464,123	3,498,177	3,781,176	4,458,028

We quote from the annual review of Jean Roederer, broker at Havre: "The quality of Congo rubber has been further improved this year, thanks to the intelligent care brought to bear on the collecting processes by the exporters. This they have constantly realized in the excellent conditions, in spite of the critical state of market affairs. Quotations for caoutchouc have suffered, during the year, under consideration fluctuations of extraordinary violence. In spite of the extensive speculation in Pará sorts, in 1909, its upward movement continued at the opening of 1910, the culminating point being reached in April with a price of 12s. 4d. From this period the decline was rapid and continuous, owing to the systematic and inevitable holding off of buyers, and the year closed with a price of about 5s. 9d. It is, however, a matter of satisfaction to record the fact that the Congo varieties paid a much smaller tribute to the decline than did Pará, which may be attributed to the speculation and manipulation to which the latter product is so constantly subject."

COMPARATIVE HAVRE PRICES (FRANCS PER KILO).

	Dec. 31, 1909.	Dec. 31, 1910.	De-crease.
Congo Haut-Oubangui	13.20-13.60	12.25-12.60	7.35%
Congo Kotto	13.20-13.60	12.25-12.60	7.35%
Congo Ekela Kadei-Sangha.....	13.50-14.50	13.30-14.—	3.45%
Congo Lobay	13.50-14.50	13.30-14.—	3.45%
Congo Haute-Sangha	14.20-14.60	13.30-14.—	4.10%
Pará, fine	21.60-21.75	15.95-16.10	25.97%

